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ATLAS OF THE FLORA OF NEW ENGLAND: FAMILIES OF VOLS. 9-13 AND 15-16 (EXCEPT FABACEAE & ROSACEAE) OF THE FLORA OF NORTH AMERICA SERIES

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ABSTRACT

Dot maps are provided to depict the county level distribution of the Magnoliophyta taxa growing outside of cultivation in the six New England states of the northeastern USA for families in volumes 9-13 and 15-16 (except Fabaceae and Rosaceae) of the Flora of North America series. Families included are Anacardiaceae, Apiaceae, Araliaceae, Balsaminaceae, Boraginaceae, Celastraceae, Cornaceae, Elaeagnaceae, Euphorbiaceae, Geraniaceae, Haloragaceae, Hydrangeaceae, Hydrophyllaceae, Lamiaceae, Linaceae, Lythraceae, Oleaceae, Onagraceae, Oxalidaceae, Polemoniaceae, Polygalaceae, Rhamnaceae, Rutaceae, Sapindaceae, Verbenaceae, Vitaceae, and other small families. The maps treat 527 taxa (species, subspecies, varieties, and hybrids, but not forms) based primarily on specimens in the major herbaria of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, with most data derived from the holdings of the New England Botanical Club Herbarium (NEBC). Brief synonymy (to account for names used in standard manuals and floras for the area and on herbarium specimens), habitat, chromosome information, and common names are also provided.

This article is the fourteenth and last in a series (Angelo & Boufford 1996, 1998, 2000, 2007, 2010, 2011a, 2011b, 2012a, 2012b, 2012c, 2013a, 2013b, 2014) that presents the distributions of the vascular flora of New England in the form of dot distribution maps at the county level (Figure 1). The atlas is posted on the internet at <http://neatlas.org>, where it will be updated as new information becomes available.

This project encompasses all vascular plants (lycophytes, pteridophytes and spermatophytes) at the rank of species, subspecies, and variety growing in reproducing populations outside of cultivated habitats in the six New England states. Hybrids are also included, but forms and other ranks below the level of variety are not. The dots are based on voucher specimens primarily in New England herbaria (of colleges, universities, botanical gardens, and public museums). This fourteenth installment includes the families that will be included in volumes 9-13 and 15-16 (except Fabaceae and Rosaceae) of the Flora of North America North of Mexico (FNANM) series. Of the 527 taxa treated, 306 are not native to the region.

The habitat data are distillations from a variety of sources augmented by our own field observations. An attempt was made to indicate habitat information as it applies to a particular taxon in New England rather than to the entire range of the taxon. Habitat information is not provided for hybrid taxa.

It is our hope that these articles will stimulate additional field work to supplement the distributions portrayed in the maps. The New England Botanical Club herbarium has proven to be the most important resource for this project. We are eager to receive information on voucher specimens in

public herbaria documenting range extensions and filling county gaps in distributions. Similarly, because the atlas of the New England flora will be continuously updated as new information becomes available, we are eager to receive notification of published corrections of cytological information and new, documented chromosome counts for taxa in the New England flora.

MATERIALS AND METHODS

Materials and methods are as outlined in Angelo and Boufford (1996) and in a web version (Angelo & Boufford 2011c) and are not repeated here.

TAXONOMY AND FORMAT

The taxonomy and nomenclature adopted for this work primarily follow that of draft treatments for the Flora of North America project and checklists of accepted taxa of The Flora of North America Expertise Network, except that families, genera, and species are arranged alphabetically. The families and their circumscription do not necessarily reflect current views on relationships or composition. The Angiosperm Phylogeny Website (Stevens 2001 onwards) should be consulted for a continuously updated treatment of families and their inclusive genera. Named and unnamed hybrid taxa are placed alphabetically at the end of the genus in which they occur. Unnamed hybrids combine the names of the progenitors alphabetically by epithet. Taxa that are not native to New England are indicated by uppercase text. Unpublished names are not used, even if publication is pending.

Chromosome numbers are taken primarily from draft treatments for the Flora of North America project, Gleason and Cronquist (1991), and from Goldblatt and Johnson (1979–).

Synonymy is provided primarily with respect to names accepted in standard manuals covering New England published from 1950 onward, including Fernald (1950), Gleason and Cronquist (1991), and Seymour (1982) and on herbarium labels in New England herbaria. Synonyms have not been provided where the distribution for the synonymized name does not include New England.

The following list (which includes excluded taxa) will aid readers in finding familiar names that have been transferred to other taxa:

Acanthopanax	=>	*Eleutherococcus*
ACERACEAE	=>	*SAPINDACEAE*
Anchusa (in part)	=>	*Cynoglottis*
APIACEAE (in part)	=>	*ARALIACEAE*
Calylophus	=>	*Oenothera*
Coelopleurum	=>	*Angelica*
CORNACEAE (in part)	=>	*NYSSACEAE*
Crotonopsis	=>	*Croton*
Epilobium (in part)	=>	*Chamaenerion*
Gaura	=>	*Oenothera*
Gilia (in part)	=>	*Ipomopsis*
HIPPOCASTANACEAE	=>	*SAPINDACEAE*
HYDROCARYACEAE	=>	*LYTHRACEAE*
Isanthus	=>	*Trichostema*
LABIATAE	=>	*LAMIACEAE*
Lithospermum (in part)	=>	*Buglossoides*
LORANTHACEAE	=>	*VISCACEAE*
Lycopsis	=>	*Anchusa*

Onosmodium	=>	*Lithospermum*
Rhamnus (in part)	=>	*Frangula*
Rhus (in part)	=>	*Toxicodendron*
SANTALACEAE (in part)	=>	*COMANDRACEAE*
Satureja (in part)	=>	*Clinopodium*
SAXIFRAGACEAE (in part)	=>	*CELASTRACEAE*
SAXIFRAGACEAE (in part)	=>	*HYDRANGEACEAE*
TRAPACEAE	=>	*LYTHRACEAE*
UMBELLIFERAE (in part)	=>	*APIACEAE*
UMBELLIFERAE (in part)	=>	*ARALIACEAE*
Verbena (in part)	=>	*Glandularia*

The following species have been reported from our area but are excluded for the reasons noted:

ACER PALMATUM Thunberg [no voucher of a population in the wild found; reported from various counties in Connecticut, Massachusetts and Rhode Island]

AGASTACHE RUGOSA (Fischer & C.A. Meyer) Kuntze [no voucher of wild occurrence found; reported from Massachusetts]

AMPELOPSIS ACONITIFOLIA Bunge [no voucher found; reported from New London County, Connecticut, and Massachusetts]

AMPELOPSIS HUMILIFOLIA Bunge [no voucher of wild occurrence found; reported on the grounds of the Arnold Arboretum in Suffolk County, Massachusetts]

AMSINCKIA SPECTABILIS Fischer & C.A. Meyer [voucher for this is misidentified specimen of *AMSINCKIA MENZIESII* (Lehmann) A. Nelson & J.F. Macbride; reported from Middlesex County, Massachusetts]

ASTRANTIA MAJOR Linnaeus [no voucher of wild occurrence found; reported from Worcester County, Massachusetts]

BALLOTA NIGRA Linnaeus var. *ALBA* (Linnaeus) Tinant [no voucher found; reported from New Haven County, Connecticut]

BUPLEURUM ODONTITES Linnaeus [no voucher of wild occurrence found; reported from Essex County, Massachusetts]

BUXUS SEMPERVIRENS Linnaeus [no voucher of wild occurrence found; reported from Newport County, Rhode Island]

CARDIOSPERMUM HALICABABUM Linnaeus var. *HALICABABUM* [no voucher of wild occurrence found; reported from Connecticut, and Middlesex County, Massachusetts]

CHAEROPHYLLUM TAINTURIERI Hooker [no voucher found; reported from Rhode Island]

CLINOPODIUM NEPETA (Linnaeus) Kuntze subsp. *GLANDULOSUM* (Requien) Govaerts (*C. CALAMINTHA* (Linnaeus) Kuntze; *SATUREJA CALAMINTHA* (Linnaeus)

Scheele var. *GLANDULOSA* (Requien) Briquet) [no voucher found; reported from Kent County, Rhode Island]

Collinsonia punctata Elliott (*C. canadensis* var. *punctata* (Elliott) A. Gray) [no voucher found; report apparently based on misidentified voucher; reported from New London County, Connecticut]

CORNUS KOUSA Bürger *ex* Miquel [no voucher of wild occurrence found; reported from Fairfield County, Connecticut]

CROTON HEPTALON (Kuntze) B.W. van Ee & P.E. Berry [no voucher found; reported from Suffolk County, Massachusetts]

CUMINUM CYMINUM Linnaeus [no voucher of wild occurrence found; reported from Suffolk County, Massachusetts]

CYMOPTERIS GLOMERATUS (Nuttall) de Candolle [reported in error from Rockingham County, New Hampshire; report based on an article on this western species in Rhodora 107:359 (2005) confusing it with the report of a new record of *Hibiscus moscheutos* from Rockingham County, New Hampshire in the same issue.]

CYNOGLOSSUM WALLICHII G. Don [no voucher of wild occurrence found; reported as adventive in a garden in Worcester County, Massachusetts]

DRACOCEPHALUM THYMIFLORUM Linnaeus [no voucher found; reported in wool waste from Middlesex County, Massachusetts]

ELAEAGNUS PUNGENS Thunberg [no voucher of established wild population found; reported as waif in Plymouth County, Massachusetts]

EPILOBIUM PARVIFLORUM Schreber [no voucher found; reported Washington County, Vermont]

ERODIUM LACINIATUM (Cavanilles) Willdenow var. *BOVEI* (Delile) Murbeck [no voucher found; reported in 1918 in wool waste in Middlesex County, Massachusetts]

EUONYMUS OBOVATUS Nuttall [no voucher of wild occurrence found; reported from Suffolk County, Massachusetts based on citation of occurrence on grounds of Arnold Arboretum]

EUONYMUS PHELLOMANUS Loesener [no voucher of wild occurrence found; reported from Fairfield and New Haven Counties, Connecticut, and from Norfolk County, Massachusetts]

Euphorbia ipecacuanhae Linnaeus [no voucher found; historic collections of this are reported in the literature from Hartford County, Connecticut]

EUPHORBIA PUBENTISSIMA Michaux (*E. COROLLATA* Linnaeus var. *MOLLIS* Millspaugh) [voucher is misidentified *E. COROLLATA* (typical); reported from Coös County, New Hampshire]

EUPHORBIA SERPENS Kunth [only cited voucher collected in garden; reported from Belknap County, New Hampshire]

EUPHORBIA SERPYLLIFOLIA Persoon var. *SERPYLLIFOLIA* [no voucher found; reported from New Hampshire]

FORSYTHIA OVATA Nakai [no voucher found; reported from Rhode Island]

GERANIUM AEQUALE (Babington) Aedo [no vouchers of wild occurrence found; reported from Barnstable and Norfolk Counties, Massachusetts, and Chittenden County, Vermont]

GILIA CAPITATA Sims subsp. *CAPITATA* [no voucher of wild occurrence found; reported from Caledonia County, Vermont]

GLANDULARIA CANADENSIS (Linnaeus) Small (*VERBENA CANADENSIS* (Linnaeus Britton)) [no voucher of wild occurrence found; reported from New Haven County, Connecticut]

GLANDULARIA × *HYBRIDA* (Groenland & Rümpler) G.L. Nesom & Pruski [no voucher of wild occurrence found; reported from Nantucket County, Massachusetts]

HYDRANGEA CINEREA Small (*H. ARBORESCENS* Linnaeus var. *DEAMII* St. John) [no voucher of wild occurrence found; reported from Essex County, Massachusetts]

KOELREUTERIA PANICULATA Lamarck [no voucher of wild occurrence found; reported from various counties in Connecticut and Massachusetts]

LAMIUM ALBUM Linnaeus [no voucher of wild occurrence found; reported from Cumberland and Kennebec Counties, Maine, and Essex and Middlesex Counties, Massachusetts]

LAPPULA CENCHRUSOIDES A. Nelson [no voucher found; reported from Connecticut and Massachusetts]

LAVANDULA ANGUSTIFOLIA Miller [no voucher of wild occurrence found; reported from Chittenden, Orleans and Windham Counties, Vermont]

LITHOSPERMUM LATIFOLIUM Michaux [no voucher of wild occurrence found; reported from Essex County, Massachusetts]

LYCOPUS ASPER Greene [no voucher of wild occurrence found; reported from Essex County, Massachusetts]

Lythrum lineare Linnaeus [no voucher found; reported from Fairfield County, Connecticut]

LYTHRUM VIRGATUM Linnaeus [report based on misidentified *L. SALICARIA*; reported from Norfolk County, Massachusetts]

MERTENSIA PANICULATA (Aiton) G. Don [no voucher found; reported from Fairfield County, Connecticut]

MONARDA FISTULOSA Linnaeus var. *RUBRA* A. Gray (*M. MEDIA* misapplied) [no voucher of wild occurrence found; reported from various counties in Connecticut, Maine, Massachusetts and New Hampshire]

MONARDA PUNCTATA Linnaeus var. *PUNCTATA* [no voucher of wild occurrence found; reported from Essex County, Massachusetts, and Chittenden County, Vermont]

MYOSOTIS DISCOLOR Persoon (*M. VERSICOLOR* (Persoon) Smith) [no voucher of wild occurrence found; reported from Worcester County, Massachusetts]

NAVARRETIA INTERTEXTA (Bentham) Hooker subsp. *PROPINQUA* (Suksdorf) A.G. Day [no voucher found; reported from Massachusetts]

Oenothera elata Kunth subsp. *hirsutissima* (A. Gray *ex* S. Watson) W. Dietrich [no voucher found; reported from southern New England]

OENOTHERA FILIFORMIS (Small) W.L. Wagner & Hoch [no voucher found; reported from Hartford County, Connecticut, and Plymouth County, Massachusetts]

ORIGANUM MAJORANA Linnaeus [no voucher of wild occurrence found; reported from Essex and Worcester Counties, Massachusetts]

OXALIS INTERMEDIA A. Richard [no voucher of wild occurrence found; reported from Essex County, Massachusetts]

PHACELIA CAMPANULARIA A. Gray subsp. *CAMPANULARIA* [no voucher found; reported from Suffolk County, Massachusetts]

PHACELIA LINEARIS (Pursh) Holzinger [no voucher of wild occurrence found; reported from Hartford County, Connecticut, and Hancock County, Maine]

PHACELIA PURSHII Buckley [no voucher of wild occurrence found; reported from Connecticut, and Providence County, Rhode Island]

PHACELIA TANACETIFOLIA Bentham [no voucher of wild occurrence found; reported from Hancock County (Mt. Desert Island), Maine, and Middlesex and Worcester Counties, Massachusetts]

PHACELIA VISCIDA (Bentham *ex* Lindley) Torrey [no voucher found; reported from Connecticut]

PHLOX DRUMMONDII Hooker subsp. *DRUMMONDII* [no voucher of wild occurrence found; reported from New London County, Connecticut]

PHLOX LATIFOLIA Michaux (*PHLOX OVATA* misapplied) [no voucher found; reported from Berkshire County, Massachusetts]

PLAGIOBOTHRYS HISPIDULUS (Greene) I.M. Johnston [no voucher found; reported from York County, Maine, and Middlesex County, Massachusetts. The voucher for the

Middlesex County, Massachusetts, report has been identified as *P. RETICULATUS* (Piper) I.M. Johnston.]

PLAGIOBOTHRYS TRACHYCARPUS (A. Gray) I.M. Johnston [no voucher of wild occurrence found; reported from Hampshire County, Massachusetts]

POLEMONIUM CUSPIDATUM Siebold & Zuccarini [no voucher found; reported from Aroostook County, Maine]

POLEMONIUM MICRANTHUM Bentham [no voucher of wild occurrence found; reported from Norfolk County, Massachusetts.]

PRUNELLA LACINIATA Linnaeus [no voucher of wild occurrence found; reported from Dukes County, Massachusetts]

RHAMNUS DAVURICA Pallas subsp. *NIPPONICA* (Makino) Kartesz & Gandhi [no voucher of wild occurrence found; reported from Worcester County, Massachusetts]

RHAMNUS UTILIS Decaisne [no voucher found; reported from Tolland County, Connecticut]

SELINUM CARVIFOLIA (Linnaeus) Linnaeus [no voucher found; reported from vacant lot in Suffolk County, Massachusetts]

SCUTELLARIA ALTISSIMA Linnaeus [no voucher of wild occurrence found; reported from Suffolk County, Massachusetts]

Scutellaria parvula Michaux var. *australis* Fassett [no voucher found; reported from southern Connecticut]

SIUM SISARUM Linnaeus [no voucher of wild occurrence found; reported from Washington County, Rhode Island]

STACHYS CLINGMANII Small [no voucher found; reported from Vermont]

STACHYS OFFICINALIS (Linnaeus) Trevisan [no voucher found; reported from Middlesex County, Massachusetts]

SYRINGA JOSIKAEA J. Jacquin *ex* Reichenbach [no voucher found; reported from Berkshire County, Massachusetts]

THYMUS VULGARIS Linnaeus [no voucher of wild occurrence found; reported from Essex County, Vermont]

TRIBULUS TERRESTRIS Linnaeus [no voucher found; reported in wool waste from Worcester County, Massachusetts]

TURGENIA LATIFOLIA (Linnaeus) Hoffmann [no voucher found; reported from Providence County, Rhode Island]

ANGIOSPERMAE (MAGNOLIOPHYTA) – ANGIOSPERMS

ACTINIDIACEAE

ACTINIDIA ARGUTA (Siebold & Zuccarini) Planchon *ex* Miquel—Hardy Kiwi (Figure 2). $2n = 116$. Roadsides, woodland margins. From eastern Asia.

ANACARDIACEAE

COTINUS COGGYGRIA Scopoli—Smoketree (Figure 2). $2n = 30$. Waste places. From Eurasia.

Rhus aromatica Aiton var. *aromatica*—Fragrant Sumac (Figure 2). $2n = ?$ Dry ledges, rocky woodlands, often in calcareous soil, thickets as an escape.

Rhus copallinum Linnaeus var. *copallinum*—Winged Sumac (Figure 2). $2n = ?$ Dry woodlands, openings and thickets, roadsides. [*R. copallinum* var. *latifolia* Engler]

Rhus glabra Linnaeus—Smooth Sumac Elder (Figure 2). $2n = 30$. Dry fields, roadsides, woodland margins.

Rhus typhina Linnaeus—Staghorn Sumac (Figure 2). $2n = 30$. Open, wooded slopes, woodland margins, fields, roadsides, in dry, rocky or gravelly soil. [*R. hirta* (Linnaeus) Sudworth - rejected name]

— *Rhus* hybrid —

Rhus × *pulvinata* Greene (*pro species*)—(Figure 2). [*R. glabra* Linnaeus × *R. typhina* Linnaeus; *R.* × *borealis* (Britton) Greene; *R. glabra* Linnaeus var. *borealis* Britton]

Toxicodendron radicans (Linnaeus) Kuntze subsp. *radicans*—Poison Ivy (Figure 2). $2n = 30$. Roadsides, thickets, stone walls, fencerows, open woodlands, woodland margins, open sandy or rocky soil, often in disturbed sites. [*Rhus radicans* Linnaeus]

Toxicodendron radicans (Linnaeus) Kuntze subsp. *negundo* (Greene) Gillis—(Figure 2). $2n = 30$. Rich woodlands. [*T. radicans* var. *negundo* (Greene) Reveal]

Toxicodendron rydbergii (Small *ex* Rydberg) Greene—Western Poison Ivy (Figure 3). $2n = 30$. Woodlands, rocky slopes, roadsides. [*Rhus radicans* Linnaeus var. *rydbergii* (Small *ex* Rydberg) Rehder; *R. radicans* var. *vulgaris* (Michaux) de Candolle]

Toxicodendron vernix (Linnaeus) Kuntze—Poison Sumac (Figure 3). $2n = 30$. Swamps, wetland margins. [*Rhus vernix* Linnaeus]

— *Toxicodendron* hybrid —

Toxicodendron radicans (Linnaeus) Kuntze × *T. rydbergii* (Small *ex* Rydberg) Greene—(Figure 3).

APIACEAE

AEGOPODIUM PODAGRARIA Linnaeus—Goutweed (Figure 3). $2n$ = 22, 42, 44. Roadsides, waste places, open woodlands, often in moist shade. From Eurasia.

AETHUSA CYNAPIUM Linnaeus—Fool's-parsley (Figure 3). $2n$ = 20. Roadsides, waste places. From Eurasia.

ANETHUM GRAVEOLENS Linnaeus—Dill (Figure 3). $2n$ = 22. Roadsides, waste places. Cultivated worldwide, probably from southern Asia.

Angelica atropurpurea Linnaeus—Alexanders (Figure 3). $2n$ = 22. Brook and river margins, meadows, rich thickets, swamps, alluvial soil, roadside ditches.

Angelica lucida Linnaeus—Seacoast Angelica (Figure 3). $2n$ = ? Sea beach margins, fields by coastal beaches, rocks along coast. [*Coelopleurum lucidum* (Linnaeus) Fernald]

Angelica venenosa (J. Greenway) Fernald—Hairy Angelica (Figure 3). $2n$ = 22. Woodlands, fields, thickets, openings, in dry soil.

ANTHRISCUS CEREFOLIUM (Linnaeus) Hoffman—Garden Chervil (Figure 4). $2n$ = 18. Roadsides, waste places. From Eurasia.

ANTHRISCUS SYLVESTRIS (Linnaeus) Hoffman—Wild Chervil (Figure 4). $2n$ = 16. Fields, waste places, roadsides. From Eurasia, northern and central Africa.

APIUM GRAVEOLENS Linnaeus var. *DULCE* (Miller) de Candolle—Celery (Figure 4). $2n$ = 22. Waste places. From Eurasia.

BIFORA RADIANS M. von Bieberstein—Wild Bishop (Figure 4). $2n$ = 20. Waste places. From Eurasia.

BUPLEURUM LANCIFOLIUM Hornemann—(Figure 4). $2n$ = 16. Roadsides, waste places. From the Mediterranean region.

BUPLEURUM ROTUNDIFOLIUM Linnaeus—Thoroughwax (Figure 4). $2n$ = 16. Roadsides, fields. From Eurasia, northwestern Africa.

CARUM CARVI Linnaeus—Caraway (Figure 4). $2n$ = 20. Fields, roadsides, waste places. From Eurasia, northwestern Africa.

Cicuta bulbifera Linnaeus—(Figure 4). $2n$ = 22. Swamps, marshes, shores, wet thickets.

Cicuta maculata Linnaeus var. *maculata*—Spotted Cowbane (Figure 4). $2n$ = 22. Swamps, marshes, shores, meadows, low thickets, ditches.

Conioselinum chinense (Linnaeus) Britton, Sterns, & Poggenburg—Hemlock-parsley (Figure 5). $2n$ = 44. River shores, swamps, wet woodlands, meadows, damp thickets.

CONIUM MACULATUM Linnaeus—Poison Hemlock (Figure 5). $2n = 22$. Waste places, roadsides. From Eurasia, northern Africa.

CORIANDRUM SATIVUM Linnaeus—Coriander (Figure 5). $2n = 22$. Waste places, sandy seashores. Probably from the Mediterranean region.

Cryptotaenia canadensis (Linnaeus) de Candolle—Honewort (Figure 5). $2n = 22$. Rich woodlands and thickets.

DAUCUS CAROTA Linnaeus—Queen Anne's-lace (Figure 5). $2n = 18$. Dry fields, waste places, roadsides. From Eurasia, northwestern Africa

ERYNGIUM AMETHYSTINUM Linnaeus—(Figure 5). $2n = 14$. Waste places, fields. From eastern Mediterranean region.

ERYNGIUM PLANUM Linnaeus—Blue Eryngo (Figure 5). $2n = 16$. Fields, waste places, roadsides. From Eurasia.

ERYNGIUM YUCCIFOLIUM Michaux var. *YUCCIFOLIUM*—Rattlesnake-master (Figure 5). $2n = 96$. Sandy fields, other open, sandy ground. From farther south and west.

FALCARIA VULGARIS Bernhardi—Sickleweed (Figure 5). $2n = 22$. Dry, open, calcareous knoll. From Eurasia.

FOENICULUM VULGARE Miller—Fennel (Figure 6). $2n = 22$. Waste places, dry fields, roadsides. From Eurasia, northern Africa.

HERACLEUM MANTEGAZZIANUM Sommier & Levier—Giant Hogweed (Figure 6). $2n = 22$. Roadsides, woodland clearings, field and woodland margins. From the Caucasus region.

Heracleum sphondylium Linnaeus subsp. *montanum* (Schleicher *ex* Gaudin) Briquet—Cow-parsnip (Figure 6). $2n = 22$. Moist, rich ground. [*H. lanatum* Michaux; *H. maximum* W. Bartram]

HERACLEUM SPHONDYLIUM Linnaeus subsp. *SIBIRICUM* (Linnaeus) Simonkai—Hogweed (Figure 6). $2n = 22$. Fields, roadsides, waste areas. From Eurasia. [*H. SPHONDYLIUM* var. *ANGUSTIFOLIUM* Jacquin]

LEVISTICUM OFFICINALE W.D.J. Koch—Lovage (Figure 6). $2n = 22$. Roadsides. From western Asia.

Ligusticum scoticum Linnaeus subsp. *scoticum*—Scots Lovage (Figure 6). $2n = 22$. Salt marsh margins, sandy or rocky seashores.

Lilaeopsis chinensis (Linnaeus) Kuntze—(Figure 6). $2n = 22$. Muddy tidal shores, salt marshes.

MYRRHIS ODORATA (Linnaeus) Scopoli—Garden Myrrh (Figure 6). $2n = 22$. Roadsides. From Europe.

Osmorhiza berteroi de Candolle—Mountain Sweet Cicely (Figure 6). $2n = 22$. Rich woodlands. [*O. chilensis* Hooker & Arnott]

Osmorhiza claytonii (Michaux) C.B. Clarke—Hairy Sweet Cicely (Figure 7). 2*n* = 22. Rich woodlands.

Osmorhiza depauperata Philippi—(Figure 7). 2*n* = 22. Moist, deciduous woodlands. [*O. obtusa* (J.M. Coulter & Rose) Fernald]

Osmorhiza longistylis (Torrey) de Candolle—Anise-root (Figure 7). 2*n* = 22. Rich, moist woodlands. [*O. longistylis* var. *brachycoma* S.F. Blake; *O. longistylis* var. *villicaulis* Fernald]

PASTINACA SATIVA Linnaeus—Parsnip (Figure 7). 2*n* = 22. Roadsides, waste places, fields. From Eurasia.

PETROSELINUM CRISPUM (Miller) Fuss—Common Parsley (Figure 7). 2*n* = 22. Waste places, fields. From the Mediterranean region.

PEUCEDANUM PALUSTRE (Linnaeus) Moench—Milk-parsley (Figure 7). 2*n* = 22. Meadows, damp fields, swampy thickets. From Eurasia.

PIMPINELLA ANISUM Linnaeus—Anise (Figure 7). 2*n* = 18, 20. Waste places. From eastern Mediterranean region, southwestern Asia.

PIMPINELLA MAJOR (Linnaeus) Hudson—(Figure 7). 2*n* = 18, 20. Moist roadsides. From Europe.

PIMPINELLA SAXIFRAGA Linnaeus subsp. *SAXIFRAGA*—Burnet-saxifrage (Figure 7). 2*n* = 40. Cemeteries, fields, roadsides, waste places. From Eurasia.

Ptilimnium capillaceum (Michaux) Rafinesque—(Figure 8). 2*n* = 14, 16, 28. Salt marshes.

Sanicula canadensis Linnaeus var. *canadensis*—(Figure 8). 2*n* = 16. Rich woodlands.

Sanicula canadensis Linnaeus var. *grandis* Fernald—(Figure 8). 2*n* = ? Rich woodlands.

Sanicula marilandica Linnaeus—Black Snakeroot (Figure 8). 2*n* = 16. Open woodlands, thickets, often in dry, rich, rocky soil.

Sanicula odorata (Rafinesque) K.M. Pryer & L.R. Phillippe—(Figure 8). 2*n* = ? Rich woodlands. [*S. gregaria* E.P. Bicknell]

Sanicula trifoliata E.P. Bicknell—(Figure 8). 2*n* = ? Rich woodlands.

SCANDIX PECTEN-VENERIS Linnaeus—Shepherd's-needle (Figure 8). 2*n* = 26. Waste places. From Eurasia, northern Africa.

Sium carsonii Durand *ex* A. Gray—(Figure 8). 2*n* = ? Brooks, shallow water of streams.

Sium suave Walter—Water-parsnip (Figure 8). 2*n* = 12. Swamps, shores, meadows, wet thickets.

Taenidia integerrima (Linnaeus) Drude—Yellow Pimpernel (Figure 9). 2*n* = 22. Dry, open, rocky woodlands near shores.

Thaspium trifoliatum (Linnaeus) A. Gray var. *trifoliatum*—Purple Meadow-parsnip (Figure 9). 2*n* = 22. Rich woodlands.

TORILIS JAPONICA (Houttuyn) de Candolle—(Figure 9). 2*n* = 16. Woodland margins, roadsides, waste places. From Eurasia.

TORILIS LEPTOPHYLLA (Linnaeus) Reichenbach (son)—(Figure 9). 2*n* = 12. Waste places. From Eurasia, northern Africa.

Zizia aptera (A. Gray) Fernald—(Figure 9). 2*n* = 22. Dry, open woodlands, openings.

Zizia aurea (Linnaeus) W.D.J. Koch—Golden Alexanders (Figure 9). 2*n* = 22. Shores, meadows, damp thickets, wet woodlands, shaded roadsides.

ARALIACEAE

ARALIA ELATA (Miquel) Seemann—Japanese Angelica-tree (Figure 9). 2*n* = 24. Roadsides, thickets, streambanks, field margins. From eastern Asia.

Aralia hispida Ventenat—Bristly Sarsaparilla (Figure 9). 2*n* = 24. Roadsides, sandy or rocky open woodlands and clearings, in dry soil.

Aralia nudicaulis Linnaeus—Wild Sarsaparilla (Figure 9). 2*n* = 24, 48. Woodlands.

Aralia racemosa Linnaeus subsp. *racemosa*—Spikenard (Figure 10). 2*n* = 24. Woodlands, thickets, woodland margins, in rich soil.

ARALIA SPINOSA Linnaeus—Hercules'-club (Figure 10). 2*n* = 24. Thickets, roadsides, woodland margins.

ELEUTHEROCOCCUS SIEBOLDIANUS (Makino) Koidzumi—(Figure 10). 2*n* = 48. Roadsides, waste places, woodlands near waste places. From Japan. [*E. PENTAPHYLLUS* (Siebold & Zuccarini) Nakai; *ACANTHOPANAX SIEBOLDIANUS* Makino]

HEDERA HELIX Linnaeus—English Ivy (Figure 10). 2*n* = 48. Roadsides, disturbed woodlands. From Eurasia, northwestern Africa.

Hydrocotyle americana Linnaeus—Marsh Pennywort (Figure 10). 2*n* = 60. Damp woodlands and thickets, swamps, meadows, wet fields, stream margins, freshwater shores, wet ditches.

Hydrocotyle umbellata Linnaeus—Water Pennywort (Figure 10). 2*n* = ? Pond shores.

Hydrocotyle verticillata Thunberg var. *verticillata*—Whorled Pennywort (Figure 10). 2*n* = ? Pond shores.

Hydrocotyle verticillata Thunberg var. *triradiata* (A. Richard) Fernald—(Figure 10). 2*n* = ? Damp soils. [*H. prolifera* Kellogg]

KALOPANAX SEPTEMLOBUS (Thunberg) Koidzumi—Castor Aralia (Figure 10). $2n = 48$. Moist or rich woodlands, woodland margins. From eastern Asia. [*K. PICTUS* (Thunberg) Nakai]

Panax quinquefolius Linnaeus—Ginseng (Figure 11). $2n = 44, 48$. Rich woodlands.

Panax trifolius Linnaeus—Dwarf Ginseng (Figure 11). $2n = 24$. Rich, moist woodlands.

BALSAMINACEAE

IMPATIENS BALSAMINA Linnaeus—Garden Balsam (Figure 11). $2n = 14$. Waste places, beaches. From southern Asia.

Impatiens capensis Meerburgh—Spotted Touch-me-not (Figure 11). $2n = 20$. Swamps, springy places, brooksides, wet, roadside ditches, moist, shady soil.

IMPATIENS GLANDULIFERA Royle—(Figure 11). $2n = 18, 20$. Waste places, roadsides, in rich soil. From Indian subcontinent.

Impatiens pallida Nuttall—Pale Touch-me-not (Figure 11). $2n = 20, 30$. Springy places, wet, deciduous woodlands, moist, shady, chiefly calcareous soil.

BORAGINACEAE

AMSINCKIA EASTWOODIAE J.F. Macbride—(Figure 11). $2n = ?$ Moist ledges. From California. [*A. INTERMEDIA* Fischer & C.A. Meyer var. *EASTWOODIAE* (J.F. Macbride) Jepson & Hoover]

AMSINCKIA INTERMEDIA Fischer & C.A. Meyer—Common Fiddleneck (Figure 11). $2n = 15, 34$. Wool waste, roadsides, grassy hills. From western North America. [*A. MENZIESII* (Lehmann) A. Nelson & J.F. Macbride var. *INTERMEDIA* (Fischer & C.A. Meyer) Ganders]

AMSINCKIA LYCOPSOIDES Lehmann—Bugloss Fiddleneck (Figure 11). $2n = 30$. Railroads, waste places. From western North America. [*A. BARBATA* Greene]

AMSINCKIA MENZIESII (Lehmann) A. Nelson & J.F. Macbride—Rancher's Fiddleneck (Figure 12). $2n = ?$ Wool waste, roadsides. From western North America

ANCHUSA ARVENSIS (Linnaeus) M. von Bieberstein—Small Bugloss (Figure 12). $2n = 48$. Sandy fields, waste places, railroads, wool waste. From Europe. [*LYCOPSIS ARVENSIS* Linnaeus]

ANCHUSA AZUREA Miller—Italian Bugloss (Figure 12). $2n = 32$. Waste places, field margins, roadsides. From Eurasia, northern Africa.

ANCHUSA LEPTOPHYLLA Roemer & Schultes subsp. *LEPTOPHYLLA*—(Figure 12). $2n = 16, 32$. Waste places. From Eurasia.

ANCHUSA OFFICINALIS Linnaeus—Common Bugloss (Figure 12). $2n = 16$. Waste places, roadsides. From Europe.

ASPERUGO PROCUMBENS Linnaeus—Madwort (Figure 12). $2n$ = 48. Waste places, streambanks. From Eurasia.

BORAGO OFFICINALIS Linnaeus—Borage (Figure 12). $2n$ = 16. Waste places, fields. From Eurasia, northwestern Africa.

BUGLOSSOIDES ARVENSIS (Linnaeus) I.M. Johnston—Corn Gromwell (Figure 12). $2n$ = 28, 42. Waste places, roadsides, railroads, sandy fields. From Eurasia, northern Africa. [*LITHOSPERMUM ARVENSE* Linnaeus]

CRYPTANTHA AMBIGUA (A. Gray) Greene—(Figure 12). $2n$ = ? Wool waste. From western North America.

CRYPTANTHA INTERMEDIA (A. Gray) Greene—(Figure 13). $2n$ = 44. Wool waste. From western North America.

CYNOGLOSSUM AMABILE Stapf & J.R. Drummond—Chinese Hound's-tongue (Figure 13). $2n$ = 24. Roadsides, waste places. From China.

CYNOGLOSSUM MICROGLOCHIN Bentham—(Figure 13). $2n$ = ? Waste places. From central and southern Asia.

CYNOGLOSSUM OFFICINALE Linnaeus—Common Hound's-tongue (Figure 13). $2n$ = 24. Dry fields, roadsides, waste places. From Eurasia.

Cynoglossum virginianum Linnaeus var. *virginianum*—Wild Comfrey (Figure 13). $2n$ = ? Open, deciduous or mixed woodlands.

Cynoglossum virginianum Linnaeus var. *boreale* (Fernald) Cooperrider—Northern Wild Comfrey (Figure 13). $2n$ = ? Rich, open woodlands. [*C. boreale* Fernald]

CYNOGLOTTIS BARRELIERI (Allioni) Vural & Kit Tan—False Alkanet (Figure 13). $2n$ = 36. Gravelly roadsides. From Europe. [*ANCHUSA BARRELIERI* Vitman]

ECHIUM CRETICUM Linnaeus—(Figure 13). $2n$ = ? Waste places. From the Mediterranean region. [*E. AUSTRALE* Lamarck]

ECHIUM PLANTAGINEUM Linnaeus—Paterson's-curse (Figure 13). $2n$ = 16. Waste places. From Eurasia, northern Africa. [*E. VIOLACEUM* misapplied]

ECHIUM PUSTULATUM Smith—(Figure 14). $2n$ = ? Fields. From Europe. [*E. VULGARE* Linnaeus var. *PUSTULATUM* (Smith) Coincy]

ECHIUM VULGARE Linnaeus—Blueweed (Figure 14). $2n$ = 32. Waste places, railroads, dry fields, roadsides. From Eurasia.

Hackelia deflexa (Wahlenberg) Opiz var. *americana* (A. Gray) Fernald & I.M. Johnston—(Figure 14). $2n$ = ? Calcareous rocky woodlands or talus, roadsides. [*H. americana* (A. Gray) Fernald]

Hackelia virginiana (Linnaeus) I.M. Johnston (Figure 14). $2n$ = 24. Rich, open, deciduous woodlands and thickets, roadsides.

HELIOTROPIUM AMPLEXICAULE Vahl (Figure 14). $2n$ = 26, 28. Waste places. From South America.

HELIOTROPIUM CURASSAVICUM Linnaeus var. *CURASSAVICUM* Seaside Heliotrope (Figure 14). $2n$ = 26, 28. Sandy, saline soil. From southeastern North America, Central and South America.

HELIOTROPIUM EUROPAEUM Linnaeus European Heliotrope (Figure 14). $2n$ = 24, 32, 48. Waste places, wool waste. From Eurasia, northern Africa, Australia.

HELIOTROPIUM INDICUM Linnaeus Turnsole (Figure 14). $2n$ = 22, 24. Waste places. From South America.

LAPPULA OCCIDENTALIS (S. Watson) Greene var. *OCCIDENTALIS* Western Stickseed (Figure 14). $2n$ = 48. Waste places, fields, wool waste. From western North America. [*L. REDOWSKI* misapplied]

LAPPULA SQUARROSA (Retzius) Dumortier Bur Forget-me-not (Figure 15). $2n$ = 48. Roadsides, waste places, fields. From Eurasia. [*L. ECHINATA* Gilibert, invalid name]

LITHOSPERMUM CANESCENS (Michaux) Lehmann Hoary Puccoon (Figure 15). $2n$ = 14. Beaches. From farther west and south.

LITHOSPERMUM OCCIDENTALE (Mackenzie) Weakley, Witsell, & D. Estes (Figure 15). $2n$ = ? Waste places. From farther west. [*ONOSMODIUM BEJARIENSE* A. de Candolle var. *OCCIDENTALE* (Mackenzie) B.L. Turner; *O. MOLLE* Michaux var. *OCCIDENTALE* (Mackenzie) I.M. Johnston; *O. OCCIDENTALE* Mackenzie]

LITHOSPERMUM OFFICINALE Linnaeus European Gromwell (Figure 15). $2n$ = 28. Dry fields, roadsides, open places, waste places. From Eurasia.

Lithospermum virginianum Linnaeus Wild Job's-tears (Figure 15). $2n$ = ? Dry, sandy soil. [*Onosmodium virginianum* (Linnaeus) A. de Candolle]

Mertensia maritima (Linnaeus) Gray subsp. *tenella* (Th. Fries) Elven & Skarpaas (Figure 15). $2n$ = 24. Sea beaches, often gravelly.

MERTENSIA VIRGINICA (Linnaeus) Persoon *ex* Link Virginia Cowslip (Figure 15). $2n$ = 24. Waste places. From farther west and south.

MYOSOTIS ARVENSIS (Linnaeus) Hill (Figure 15). $2n$ = 48, 52, 66. Roadsides, waste places, fields. From Eurasia, northwestern Africa.

Myosotis laxa Lehmann Smaller Forget-me-not (Figure 15). $2n$ = ? Springs, muddy or gravelly shores.

MYOSOTIS SCORPIOIDES Linnaeus — True Forget-me-not (Figure 16). 2*n* = 66. Springs, muddy shores, quiet water, wet ditches, swampy meadows, and other wet ground. From Eurasia.

MYOSOTIS STRICTA Link *ex* Roemer & Schultes — (Figure 16). 2*n* = 24, 36, 48. Old fields, roadsides, waste places, often in rocky soil. From Eurasia, northwestern Africa. [*M. MICRANTHA* misapplied]

MYOSOTIS SYLVATICA Hoffmann — Garden Forget-me-not (Figure 16). 2*n* = 18. Roadsides, waste places. From Eurasia.

Myosotis verna Nuttall — Early Scorpion-grass (Figure 16). 2*n* = ? Dry, rocky woodlands, ledges, open banks.

NONEA ROSEA (M. von Bieberstein) Link — (Figure 16). 2*n* = ? Waste places. From southeastern Europe.

PENTAGLOTTIS SEMPERVIRENS (Linnaeus) Tausch *ex* L.H. Bailey — Green Alkanet (Figure 16). 2*n* = 22. Copse near beach. From southwestern Europe.

PLAGIOBOTHRYS RETICULATUS (Piper) I.M. Johnston — (Figure 16). 2*n* = ? Wool waste. From western North America.

PULMONARIA SACCHARATA Miller — Bethlehem Sage (Figure 16). 2*n* = 22, 26, 27, 28. Roadsides. Probably from Europe.

SYMPHYTUM ASPERUM Lepechin — Prickly Comfrey (Figure 16). 2*n* = 32, (45). Roadsides, waste places. From the Caucasus region.

SYMPHYTUM OFFICINALE Linnaeus — Common Comfrey (Figure 17). 2*n* = 24, 40, 48, 56. Roadsides, waste places. From Eurasia.

SYMPHYTUM TUBEROSUM Linnaeus — (Figure 17). 2*n* = 32, 64, 96, (120), (144). Ditches, fields. From Europe.

Symphytum hybrid

SYMPHYTUM × *UPLANDICUM* Nyman (*pro species*) — (Figure 17). [*S. ASPERUM* Lepechin × *S. OFFICINALE* Linnaeus]

BUXACEAE

PACHYSANDRA TERMINALIS Siebold & Zuccarini — Japanese Pachysandra (Figure 17). 2*n* = 24, 48. Roadsides, railroads, waste places, woodland margins, open woodlands. From eastern Asia.

CELASTRACEAE

CELASTRUS ORBICULATUS Thunberg—Asian Bittersweet (Figure 17). 2*n* = 46. Roadsides, thickets, woodland margins, open woodlands. From eastern Asia.

Celastrus scandens Linnaeus—American Bittersweet (Figure 17). 2*n* = 46. River thickets, roadsides, woodland margins, rocky, deciduous woodlands, usually in rich soil.

EUONYMUS ALATUS (Thunberg) Siebold—Winged Euonymus (Figure 17). 2*n* = ca. 40. Roadsides, woodlands, streambanks, thickets, clearings. From eastern Asia.

EUONYMUS ATROPURPUREUS Jacquin var. *ATROPURPUREUS*—Wahoo (Figure 17). 2*n* = ? Roadsides, thickets, railroads, woodlands. From farther south and west.

EUONYMUS EUROPAEUS Linnaeus—European Spindle-tree (Figure 17). 2*n* = 64. Woodlands, roadsides, waste places. From Eurasia.

EUONYMUS FORTUNEI (Turczaninow) Handel-Mazzetti var. *FORTUNEI*—Winter-creeper (Figure 18). 2*n* = ? Thickets, roadsides, woodland margins, waste places. From southern and eastern Asia.

EUONYMUS FORTUNEI (Turczaninow) Handel-Mazzetti var. *RADICANS* (Siebold *ex* Miquel) Rehder—Winter-creeper (Figure 18). 2*n* = ? Roadsides, railroads, open, rocky hillsides, woodlands. From eastern Asia.

Parnassia glauca Rafinesque—(Figure 18). 2*n* = 36. Streambanks, boggy spots, fens, meadows, in wet ,calcareous soil.

COMANDRACEAE

Comandra umbellata (Linnaeus) Nuttall subsp. *umbellata*—Bastard Toadflax (Figure 18). 2*n* = 26. Dry, usually sterile, open woodlands and clearings. [*C. richardsiana* Fernald]

Geocaulon lividum (Richardson) Fernald (Figure 18). 2*n* = 26. *Sphagnum* bogs, often at high altitudes, sphagnous openings, occasionally coastal peatlands.

CORNACEAE

Cornus alternifolia Linnaeus (son)—Pagoda Dogwood (Figure 18). 2*n* = 20. Rich, dry, open woodlands, thickets.

Cornus amomum Miller—Silky Dogwood (Figure 18). 2*n* = 22. Wet thickets, shores, meadows, swamps, marshes.

Cornus canadensis Linnaeus—Bunchberry (Figure 18). 2*n* = 22, 44. Acidic, usually moist, woodlands, swamps.

Cornus florida Linnaeus—Flowering Dogwood (Figure 18). 2*n* = 22. Rich, acidic woodlands.

Cornus obliqua Rafinesque—Pale Dogwood (Figure 19). 2*n* = 22. Wet thickets, swamps, woodlands, roadsides. [*C. amomum* Miller var. *schuetzeana* (C.A. Meyer) Rickett]

Cornus racemosa Lamarck—Gray Dogwood (Figure 19). 2*n* = 22. Thickets, woodlands, roadsides, streambanks, swamps.

Cornus rugosa Lamarck—Round-leaved Dogwood (Figure 19). 2*n* = 22. Woodlands, thickets, rocky slopes, usually in rich soil.

CORNUS SANGUINEA Linnaeus—Blood-twig Dogwood (Figure 19). 2*n* = 22. Railroads, damp thickets. From Eurasia.

Cornus stolonifera Michaux—Red-osier Dogwood (Figure 19). 2*n* = 22. Streambanks, wet thickets, shores, wet or swampy woodlands, meadows, wet roadsides. [*C. sericea* Linnaeus, ambiguous name]

—*Cornus* hybrids—

Cornus × *arnoldiana* Rehder—(Figure 19). [*C. amomum* Miller × *C. racemosa* Lamarck]

Cornus × *slavinii* Rehder—(Figure 19). [*C. rugosa* Lamarck × *C. stolonifera* Michaux]

ELAEAGNACEAE

ELAEAGNUS ANGUSTIFOLIA Linnaeus—Russian Olive (Figure 19). 2*n* = 28. Roadsides, waste places, streambanks. From Eurasia.

ELAEAGNUS MULTIFLORA Thunberg—Cherry Elaeagnus (Figure 19). 2*n* = ? Roadsides, dry woodlands, brook banks. From eastern Asia.

ELAEAGNUS UMBELLATA Thunberg var. *PARVIFOLIA* (Wallich *ex* Royle) C.K. Schneider—Autumn Olive (Figure 20). 2*n* = ? Thickets, roadsides, railroads, fields, woodland margins, brook margins, waste places. From Asia.

Shepherdia canadensis (Linnaeus) Nuttall—Soapberry (Figure 20). 2*n* = 22. Calcareous ledges and rocky outcrops along shores of rivers and lakes.

ELATINACEAE

Elatine americana (Pursh) Arnott—(Figure 20). 2*n* = 70-72. Muddy shores of ponds and streams, often tidal. [*E. triandra* Schkuhr var. *americana* Fassett]

Elatine minima (Nuttall) Fischer & C.A. Meyer—(Figure 20). 2*n* = ? Pond and lake shores, usually muddy, often in shallow water.

ELATINE TRIANDRA Schkuhr—(Figure 20). 2*n* = ? Pond and lake shores, quiet water of streams. From Eurasia.

EUPHORBIACEAE

Acalypha gracilens A. Gray—(Figure 20). 2*n* = 40. Dry fields, sandy thickets, roadsides, waste places.

Acalypha rhomboidea Rafinesque—(Figure 20). 2*n* = ? Fields, roadsides, woodland margins, waste places.

Acalypha virginica Linnaeus—(Figure 20). 2*n* = 40. Waste places, roadsides, fields, open woodlands, in dry soils.

CROTON CAPITATUS Michaux—Hogwort (Figure 20). 2*n* = 20. Waste places. From farther west and south.

CROTON GLANDULOSUS Linnaeus var. *SEPTENTRIONALIS* Müller Argoviensis—(Figure 21). 2*n* = ? Roadsides. From farther south and west.

CROTON MICHAUXII G.L. Webster var. *ELLIPTICA* (Willdenow) B.W. van Ee & P.E. Berry (Figure 21). 2*n* = ? Old fields, dry, sandy wastes. From farther south and west. [*C. WILLDENOWII* G.L. Webster; *CROTONOPSIS ELLIPTICA* Willdenow]

CROTON TEXENSIS (Klotzsch) Müller Argoviensis—(Figure 21). 2*n* = ? Waste places. From farther west.

EUPHORBIA COROLLATA Linnaeus—Flowering Spurge (Figure 21). 2*n* = 28. Fields, dry, open woodlands, roadsides. From farther south and west.

EUPHORBIA CYPARISSIAS Linnaeus—Cypress Spurge (Figure 21). 2*n* = 20, 40. Roadsides, waste places, old fields, cemeteries. From Eurasia.

EUPHORBIA DAVIDII Subils—(Figure 21). 2*n* = ? Railroads. From farther west. [*E. DENTATA* misapplied]

EUPHORBIA DENTATA Michaux—(Figure 21). 2*n* = 28, 56. Waste places, roadsides, railroads, sandy beaches, cemeteries. From farther south and west. [Note: Many or all of the New England records under this name might be *EUPHORBIA DAVIDII* as they have not yet been reviewed for this common error.]

EUPHORBIA DULCIS Linnaeus—Sweet Spurge (Figure 21). 2*n* = 12, 18, 24, 28. Thicket in oak woodlands. From Europe.

EUPHORBIA ESULA Linnaeus—Wolf's-milk (Figure 21). 2*n* = 20, 60, 64. Roadsides, waste places, fields. From Eurasia. [*E. ESULA* var. *URALENSIS* (Fischer *ex* Link) Dorn; *E. VIRGATA* Waldstein & Kitaibel]

Euphorbia glyptosperma Engelmann—(Figure 22). 2*n* = 22. Roadsides, railroads, dry, open soil.

EUPHORBIA HELIOSCOPIA Linnaeus—Wartweed (Figure 22). 2*n* = 42. Roadsides, waste places, fields, dry, open soil. From Eurasia, northern Africa.

EUPHORBIA LATHYRIS Linnaeus—Caper Spurge (Figure 22). 2*n* = 20. Fields, roadsides, waste places. From Mediterranean Europe.

Euphorbia maculata Linnaeus—Milk-purslane (Figure 22). 2*n* = 12, 28, 42, 56. Railroads, waste places, roadsides, dry, open soil. [*E. supina* Rafinesque]

EUPHORBIA MARGINATA Pursh—Snow-on-the-mountain (Figure 22). 2*n* = 56. Waste places. From farther west.

EUPHORBIA MESEMBRIANTHEMIFOLIA Jacquin (Figure 22). 2*n* = ? Woodlands. From Florida, Caribbean region.

Euphorbia nutans Lagasca—Eyebane (Figure 22). 2*n* = 12. Waste places, railroads, roadsides, fields, dry, open soil. [*E. maculata* misapplied]

EUPHORBIA PEPLUS Linnaeus—Petty Spurge (Figure 22). 2*n* = 16. Waste places. From Eurasia, northern Africa.

EUPHORBIA PLATYPHYLLOS Linnaeus—(Figure 22). 2*n* = (14), 28, 30. Waste places, meadows, lake shores. From the Mediterranean region.

Euphorbia polygonifolia Linnaeus—Seaside Spurge (Figure 23). 2*n* = 26. Sand dunes, sea beaches.

EUPHORBIA PROSTRATA Aiton—(Figure 23). 2*n* = 18. Cotton waste. From farther west and south, Mexico, Central and South America, Caribbean region.

Euphorbia vermiculata Rafinesque—(Figure 23). 2*n* = 16. Railroads, roadsides, waste places, fields, dry, sandy soil.

— *Euphorbia* hybrid —

EUPHORBIA × *PSEUDOESULA* Schur (*pro species*)—(Figure 23). [*E. CYPARISSIAS* Linnaeus × *E. ESULA* Linnaeus]

MERCURIALIS ANNUA Linnaeus—Herb Mercury (Figure 23). 2*n* = 16, 32, 48, 64. Waste places. From Eurasia, northern Africa.

RICINUS COMMUNIS Linnaeus—Castor-bean (Figure 23). 2*n* = 20. Waste places, railroads. Probably from Africa.

GERANIACEAE

ERODIUM BOTRYS (Cavanilles) Bertoloni—(Figure 23). 2*n* = 40, (60). Wool waste. From Eurasia, northwestern Africa.

ERODIUM BRACHYCARPUM (Godron) Thellung—(Figure 23). 2*n* = 40. Wool waste. From southern Europe.

ERODIUM CICONIUM (Linnaeus) L'Héritier (Figure 23). 2*n* = 18, 20. Wool waste, waste places. From Eurasia, northern Africa.

ERODIUM CICUTARIUM (Linnaeus) L'Héritier subsp. *CICUTARIUM*—Alfilaria (Figure 24). 2*n* = 40. Wool waste, waste places, fields, roadsides. From Eurasia, northern Africa.

ERODIUM CYGNORUM Nees—Australian Stork's-bill (Figure 24). 2*n* = 20, 40. Wool waste. From Australia.

ERODIUM MALACOIDES (Linnaeus) L'Héritier—(Figure 24). 2*n* = 40. Wool waste. From Eurasia, northern Africa.

ERODIUM MOSCHATUM (Linnaeus) L'Héritier—(Figure 24). 2*n* = 20. Wool waste, waste places, railroads. From Eurasia, northern Africa. [*E. MOSCHATUM* var. *PRAECOX* Lange]

ERODIUM STEPHANIANUM Willdenow (Figure 24). 2*n* = 16. Wool waste. From Asia.

Geranium bicknellii Britton (Figure 24). 2*n* = 52. Roadsides, waste places, dry ledges, open woodlands, clearings, fields.

Geranium carolinianum Linnaeus var. *carolinianum*—(Figure 24). 2*n* = 52. Waste places, roadsides, fields, rocky woodlands, dry, sandy soil. [*G. carolinianum* var. *confertiflorum* Fernald]

GERANIUM COLUMBINUM Linnaeus—Long-stalked Cranesbill (Figure 24). 2*n* = 18. Woodland margins, dry, sandy, somewhat calcareous, old fields. From Eurasia, northwestern Africa.

GERANIUM DISSECTUM Linnaeus (Figure 24). 2*n* = 22. Waste places, roadsides. From Eurasia, northern Africa.

GERANIUM ERIANTHUM de Candolle—(Figure 25). 2*n* = 28. Roadside ledges. From northwestern North America, northeastern Asia. [*G. PRATENSE* Linnaeus var. *ERIANTHUM* (de Candolle) B. Boivin]

Geranium maculatum Linnaeus—Wild Geranium (Figure 25). 2*n* = 52. Thickets, meadows, roadsides, woodlands, clearings.

GERANIUM MOLLE Linnaeus—Dovesfoot Cranesbill (Figure 25). 2*n* = 26. Waste places, fields, roadsides. From Eurasia, northern Africa.

GERANIUM PRATENSE Linnaeus—(Figure 25). 2*n* = 28. Fields, meadows, roadsides. From Eurasia.

GERANIUM PUSILLUM Linnaeus—Small-flowered Cranesbill (Figure 25). 2*n* = 26. Waste places, fields, roadsides. From Eurasia, northern Africa.

GERANIUM PYRENAICUM Burman (son)—(Figure 25). 2*n* = 26. Waste places. From Eurasia, northwestern Africa.

Geranium robertianum Linnaeus—Herb-Robert (Figure 25). 2*n* = 64. Rocky woodlands, ledges, coastal beaches, gravelly shores.

GERANIUM SANGUINEUM Linnaeus Bloody Cranesbill (Figure 25). 2*n* = 84. Damp fields, clearings, railroad ballast, waste places, cemeteries. From Eurasia.

GERANIUM SIBIRICUM Linnaeus—Siberian Cranesbill (Figure 25). 2*n* = 28. Waste places, roadsides, fields. From Eurasia.

GERANIUM THUNBERGII Siebold *ex* Lindley & Paxton (Figure 26). 2*n* = 28. Sandy, open area, open path by pond. From eastern Asia. [*G. NEPALENSE* Sweet var. *THUNBERGII* (Siebold *ex* Lindley & Paxton) Kudô]

HALORAGACEAE

Myriophyllum alterniflorum de Candolle—(Figure 26). 2*n* = 14. Quiet water of ponds, lakes and streams.

MYRIOPHYLLUM AQUATICUM (Vellozo) Verdcourt Parrot's-feather (Figure 26). 2*n* = ? Quiet water of ponds and streams. From South America.

Myriophyllum farwellii Morong—(Figure 26). 2*n* = ? Quiet water of ponds and streams.

MYRIOPHYLLUM HETEROPHYLLUM Michaux—(Figure 26). 2*n* = ? Quiet water of ponds, lakes and streams. From farther south and west.

Myriophyllum humile (Rafinesque) Morong—(Figure 26). 2*n* = ? Quiet water of ponds, lakes and streams, shorelines of receding waters.

Myriophyllum pinnatum (Walter) Britton, Sterns & Poggenburg—(Figure 26). 2*n* = ? Peaty or muddy shores, shallow waters.

Myriophyllum sibiricum Komarov—Siberian Water-milfoil (Figure 26). 2*n* = ? Quiet waters of lakes, ponds, and streams, in circumneutral or calcareous water. [*M. exalbescens* Fernald]

MYRIOPHYLLUM SPICATUM Linnaeus—Eurasian Water-milfoil (Figure 26). 2*n* = 42. Quiet waters of lakes, ponds, and streams, in circumneutral or calcareous water. From Eurasia, northwestern Africa.

Myriophyllum tenellum Bigelow—(Figure 27). 2*n* = 14. Shallow water, or sandy or muddy shores, of of circumneutral or acidic ponds and lakes.

Myriophyllum verticillatum Linnaeus—(Figure 27). 2*n* = 28. Quiet water of ponds, lakes and streams. [*M. verticillatum* var. *pectinatum* Wallroth]

Myriophyllum hybrids

MYRIOPHYLLUM HETEROPHYLLUM Michaux × *M. LAXUM* Shuttleworth *ex* Chapman—(Figure 27).

MYRIOPHYLLUM HETEROPHYLLUM Michaux × *M. pinnatum* (Walter) Britton, Sterns & Poggenburg (Figure 27).

Proserpinaca intermedia Mackenzie—(Figure 27). 2*n* = ? Shallow water and shores of acidic ponds and lakes.

Proserpinaca palustris Linnaeus var. *palustris*—(Figure 27). 2*n* = ? Shallow water and shores of acidic ponds and lakes.

Proserpinaca palustris Linnaeus var. *crebra* Fernald & Griscom—(Figure 27). 2*n* = ? Shallow water and shores of acidic ponds and lakes.

Proserpinaca pectinata Lamarck—(Figure 27). 2*n* = ? Sandy or peaty, acidic ponds, pools, or depressions, swamps.

HYDRANGEACEAE

DEUTZIA SCABRA Thunberg—(Figure 27). 2*n* = 26. Waste places, roadsides, cemeteries, thickets, woodlands, streambanks. From Japan.

HYDRANGEA ARBORESCENS Linnaeus—Wild Hydrangea (Figure 28). 2*n* = 36, 38. Roadsides, swamps, streambanks, thickets. From farther south and west.

HYDRANGEA PANICULATA Siebold—(Figure 28). 2*n* = (36), 72, (108). Swamps, damp woodlands, roadsides, streambanks. From eastern Asia.

HYDRANGEA QUERCIFOLIA W. Bartram—(Figure 28). 2*n* = ? Dry, open hillsides. From southeastern United States.

HYDRANGEA RADIATA Walter—Silverleaf Hydrangea (Figure 28). 2*n* = 36. Waste places. From southeastern United States. [*H. ARBORESCENS* Linnaeus subsp. *RADIATA* (Walter) E.M. McClintock]

PHILADELPHUS CORONARIUS Linnaeus—Sweet Mock-orange (Figure 28). 2*n* = 26. Woodlands, roadside thickets, woodland margins. From Eurasia. [*P. CAUCASICUS* Koehne]

PHILADELPHUS INCANUS Koehne—(Figure 28). 2*n* = ? Margins of rich woodlands. From China.

PHILADELPHUS INODORUS Linnaeus—(Figure 28). 2*n* = 26. Woodland margins, roadsides. From southeastern United States. [*P. INODORUS* var. *GRANDIFLORUS* (Willdenow) A. Gray]

PHILADELPHUS PUBESCENS Loiseleur—(Figure 28). 2*n* = 26. Waste places, streambanks, deciduous woodlands, thickets. From farther west and south. [*P. PUBESCENS* var. *VERRUCOSUS* (Schrader *ex* de Candolle) S.Y. Hu]

— *Philadelphus* hybrids —

PHILADELPHUS × *NIVALIS* Jacques—(Figure 28). [*P. CORONARIUS* Linnaeus × *P. PUBESCENS* Loiseleur]

PHILADELPHUS × *POLYANTHUS* Rehder—(Figure 29). [*P. CORONARIUS* Linnaeus × ?]

PHILADELPHUS × *VIRGINALIS* Rehder (Figure 29). [unknown parentage]

HYDROPHYLLACEAE

ELLISIA NYCTELEA (Linnaeus) Linnaeus—Water-pod (Figure 29). $2n = 20$. Fields. From farther west and south.

Hydrophyllum canadense Linnaeus (Figure 29). $2n = 18$. Damp, rich woodlands, mountain brooksides, rich humus at base of calcareous ledges.

Hydrophyllum virginianum Linnaeus var. *virginianum*—John's-cabbage (Figure 29). $2n = 18$. Rich, deciduous, often wet, woodlands.

PHACELIA BRACHYLOBA (Bentham) A. Gray—(Figure 29). $2n = ?$ Wool waste, waste places. From California, Baja Mexico.

PHACELIA DISTANS Bentham (Figure 29). $2n = 24$. Wool waste. From southwestern United States, Baja Mexico.

PHACELIA EGENA (Brand) Greene *ex* J.T. Howell—(Figure 29). $2n = 22$. Wool waste. From California. [*P. MAGELLANICA* (Lamarck) Coville]

PHACELIA MINOR (Harvey) Thellung *ex* F. Zimmerman—(Figure 29). $2n = ?$ Wool waste. From California, Baja Mexico.

LAMIACEAE

AGASTACHE FOENICULUM (Pursh) Kuntze—Blue Giant Hyssop (Figure 30). $2n = 18$. Waste places, woodland margins, fields. From farther west.

Agastache nepetoides (Linnaeus) Kuntze—Yellow Giant Hyssop (Figure 30). $2n = 18$. Roadsides, thickets, open woodlands.

Agastache scrophulariifolia (Willdenow) Kuntze—Purple Giant Hyssop (Figure 30). $2n = 18$. Thickets, rich, open woodlands, streambanks, roadsides. [*A. scrophulariifolia* var. *mollis* (Fernald) A. Heller]

AJUGA GENEVENSIS Linnaeus—(Figure 30). $2n = 32$. Fields, waste places, roadsides, dry ledge outcrops, usually in calcareous soil. From Eurasia.

AJUGA REPTANS Linnaeus (Figure 30). $2n = 32$. Moist shade, roadsides, fields, wet meadows, woodland margins. From Eurasia, northwestern Africa.

BALLOTA NIGRA Linnaeus var. *NIGRA*—Black Horehound (Figure 30). $2n = 20, (22)$. Waste places, roadsides, calcareous hillsides. From Eurasia, northwestern Africa.

Blephilia ciliata (Linnaeus) Bentham—(Figure 30). $2n = ?$ Fields, river meadows, woodlands, roadsides, railroads.

Blephilia hirsuta (Pursh) Bentham var. *hirsuta*—(Figure 30). 2*n* = ? Moist woodlands.

Blephilia hirsuta (Pursh) Bentham var. *glabrata* Fernald—(Figure 30). 2*n* = ? Dry fields.

CLINOPODIUM ACINOS (Linnaeus) Kuntze—Mother-of-Thyme (Figure 31). 2*n* = 18. Fields, roadsides, railroads, waste places, often in rocky sites. From Eurasia. [*Satureja acinos* (Linnaeus) Scheele]

Clinopodium vulgare Linnaeus—Wild Basil (Figure 31). 2*n* = 20. Thickets, woodlands, clearings, fields, roadsides, ledges. [*Satureja vulgaris* (Linnaeus) Fritsch var. *neogaea* Fernald]

Collinsonia canadensis Linnaeus—Richweed (Figure 31). 2*n* = 50. Rich, moist woodlands.

DRACOCEPHALUM MOLDAVICA Linnaeus—(Figure 31). 2*n* = 10. Wool waste. From Asia.

DRACOCEPHALUM PARVIFLORUM Nuttall—American Dragonhead (Figure 31). 2*n* = 14. Waste places, fields. From farther west.

ELSHOLTZIA CILIATA (Thunberg) Hylander—(Figure 31). 2*n* = 16, 18, 32. Waste places, roadsides, railroads, fields. From Asia.

GALEOPSIS BIFIDA Boenninghausen—(Figure 31). 2*n* = 32. Roadsides, waste places, fields. From Eurasia. [*G. TETRAHIT* Linnaeus var. *BIFIDA* (Boenninghausen) Lejeune & Courtois]

GALEOPSIS LADANUM Linnaeus var. *LADANUM*—(Figure 31). 2*n* = 16. Waste places, sea beaches, meadows. From Eurasia. [*G. LADANUM* var. *LATIFOLIA* (Hoffman) Wallroth]

GALEOPSIS TETRAHIT Linnaeus—(Figure 31). 2*n* = 32. Woodlands, fields, roadsides, waste places. From Eurasia.

GLECHOMA HEDERACEA Linnaeus—Gill-over-the-ground (Figure 32). 2*n* = 18, 36. Roadsides, moist woodlands, damp, shaded places, waste places. From Eurasia. [*G. HEDERACEA* var. *MICRANTHA* Moricand]

HEDEOMA HISPIDA Pursh—(Figure 32). 2*n* = 18, 38. Dry fields, calcareous ledges, roadsides. From farther west and south.

Hedeoma pulegioides (Linnaeus) Persoon—American False Pennyroyal (Figure 32). 2*n* = 38. Dry fields, ledges, roadsides.

HYSSOPUS OFFICINALIS Linnaeus—Hyssop (Figure 32). 2*n* = 12. Roadsides, dry fields, waste places. From Eurasia, northwestern Africa.

LAMIUM AMPLEXICAULE Linnaeus—Henbit (Figure 32). 2*n* = 18. Waste places, roadsides, fields. From Eurasia, northern Africa.

LAMIUM GALEOBDOLON (Linnaeus) Linnaeus—(Figure 32). 2*n* = 18. Roadside thickets, *Quercus* woodlands. From Eurasia.

LAMIUM MACULATUM Linnaeus—(Figure 32). 2*n* = 18. Roadsides, waste places. From Eurasia.

LAMIUM PURPUREUM Linnaeus var. *PURPUREUM*—Purple Dead-nettle (Figure 32). $2n = 18$. Waste places, roadsides, fields. From Eurasia, northwestern Africa.

LAMIUM PURPUREUM Linnaeus var. *INCISUM* (Willdenow) Persoon—(Figure 32). $2n = ?$ Waste places, roadsides. From Eurasia, northwestern Africa. [*L. HYBRIDUM* misapplied]

LEONURUS CARDIACA Linnaeus subsp. *CARDIACA*—Common Motherwort (Figure 33). $2n = 18$. Waste places, roadsides, woodland margins. From Eurasia.

Lycopus americanus Muhlenberg *ex* W.P.C. Barton—(Figure 33). $2n = 22$. Swampy woodlands, thickets, shores.

Lycopus amplectens Rafinesque—(Figure 33). $2n = 22$. Pond shores, bogs, swamps, in damp, sandy or peaty, soil. [*L. amplectens* var. *pubens* (Britton *ex* Small) Fernald]

LYCOPUS EUROPAEUS Linnaeus—(Figure 33). $2n = 22$. Waste places, roadsides. From Eurasia. [*L. EUROPAEUS* var. *MOLLIS* (J. Kerner) Briquet]

Lycopus rubellus Moench—(Figure 33). $2n = 22$. Wet fields, swamps, thickets, shores.

Lycopus uniflorus Michaux var. *uniflorus*—Northern Bugleweed (Figure 33). $2n = 22$. Shady, moist places, swamps, shores.

Lycopus virginicus Linnaeus—(Figure 33). $2n = 22$. Swampy woodlands, shores, wetland margins.

Lycopus hybrid

Lycopus × *sherardii* E.S. Steele (*pro species*)—(Figure 33). [*L. uniflorus* Michaux × *L. virginicus* Linnaeus]

MARRUBIUM VULGARE Linnaeus—Common Horehound (Figure 33). $2n = 34$. Waste places, roadsides. From Eurasia, northwestern Africa.

MELISSA OFFICINALIS Linnaeus—Common Balm (Figure 34). $2n = 32, 64$. Waste places, roadsides. From Eurasia, northwestern Africa.

MENTHA AQUATICA Linnaeus var. *CITRATA* (Ehrhart) Fresenius—Bergamot Mint (Figure 34). $2n = 96$. Waste places, roadsides. From Europe. [*M. CITRATA* Ehrhart]

MENTHA ARVENSIS Linnaeus subsp. *PARIETARIIFOLIA* (Becker) Briquet—Ginger Mint (Figure 34). $2n = 72$. Wet places, roadsides, fields, waste places. From Europe. [*M. GENTILIS* Linnaeus]

Mentha canadensis Linnaeus—American Corn Mint (Figure 34). $2n = 96$. Moist, open soils, shores, fields, roadsides. [*M. canadensis* var. *villosa* Bentham; *M. arvensis* var. *arvensis* misapplied; *M. arvensis* Linnaeus var. *canadensis* (Linnaeus) Kuntze; *M. arvensis* var. *villosa* (Bentham) S.R. Stewart]

MENTHA SPICATA Linnaeus var. *SPICATA*—Spearmint (Figure 34). 2*n* = 36, 48. Wet thickets, wet fields, shores, roadsides, waste places. From Europe. [*M. LONGIFOLIA* var. *LONGIFOLIA* misapplied; *M. LONGIFOLIA* var. *MOLLISSIMA* misapplied]

MENTHA SUAVEOLENS Ehrhart subsp. *SUAVEOLENS*—Apple Mint (Figure 34). 2*n* = 24. Swales, waste places. From Europe.

Mentha hybrids

MENTHA × *GRACILIS* Sole (*pro species*)—(Figure 34). [*M. ARVENSIS* Linnaeus × *M. SPICATA* Linnaeus; *M. CARDIACA* J. Gerarde *ex* Baker]

MENTHA × *PIPERITA* Linnaeus (*pro species*)—(Figure 34). [*M. AQUATICA* Linnaeus × *M. SPICATA* Linnaeus; *M. CRISPA* Linnaeus]

MENTHA × *ROTUNDIFOLIA* (Linnaeus) Hudson (*pro species*)—(Figure 34). [*M. LONGIFOLIA* (Linnaeus) Linnaeus × *M. SUAVEOLENS* Ehrhart]

MENTHA × *SMITHIANA* R.A. Graham—(Figure 35). [*M. AQUATICA* Linnaeus × *M. ARVENSIS* Linnaeus × *M. SPICATA* Linnaeus]

MENTHA × *VERTICILLATA* Linnaeus (*pro species*)—(Figure 35). [*M. AQUATICA* Linnaeus × *M. ARVENSIS* Linnaeus]

MENTHA × *VILLOSA* Hudson (*pro species*)—(Figure 35). [*M. SPICATA* Linnaeus × *M. SUAVEOLENS* Ehrhart; *M. ALOPECUROIDES* Hull]

MONARDA CLINOPODIA Linnaeus—Basil Bee-balm (Figure 35). 2*n* = ? Roadsides, low woodlands. From farther south and west.

MONARDA DIDYMA Linnaeus—Oswego-tea (Figure 35). 2*n* = 36. Roadsides, waste places, woodland margins, thickets, fields, clearings. From farther south and west.

Monarda fistulosa Linnaeus var. *fistulosa*—Wild Bergamot (Figure 35). 2*n* = 18, 36. Roadsides, woodlands, clearings, thickets, meadows, fields, railroads, streambanks, waste places.

Monarda fistulosa Linnaeus var. *mollis* (Linnaeus) Bentham—(Figure 35). 2*n* = ? Fields, roadsides, open woodlands, fencerows, waste places.

MONARDA MEDIA Willdenow—Purple Bergamot (Figure 35). 2*n* = 36. Roadsides, thickets, fencerows, woodland margins. From farther west and south. [*M. FISTULOSA* var. *RUBRA* misapplied]

Monarda punctata Linnaeus var. *villicaulis* (Pennell) E.J. Palmer & Steyermark—(Figure 35). 2*n* = ? Sandy fields and roadsides, dry, sandy soil.

NEPETA CATARIA Linnaeus—Catnip (Figure 36). 2*n* = 34, 36. Fields, waste places, roadsides, deciduous woodlands. From Eurasia.

OCIMUM BASILICUM Linnaeus—Sweet Basil (Figure 36). 2*n* = (30), 48, 52, 72. Waste places. Possibly from Africa.

ORIGANUM VULGARE Linnaeus subsp. *VULGARE*—Wild Marjoram (Figure 36). 2*n* = 30, 32. Waste places, roadsides, railroads, fields, woodlands, brooksides, meadows. From Eurasia, northwestern Africa.

PERILLA FRUTESCENS (Linnaeus) Britton var. *FRUTESCENS*—(Figure 36). 2*n* = 40. Waste places, roadsides, fields. From southern and eastern Asia. [*P. OCYMOIDES* Linnaeus]

PERILLA FRUTESCENS (Linnaeus) Britton var. *CRISPA* (Bentham) W. Deane—(Figure 36). 2*n* = ? Waste places, roadsides. Known only from cultivation.

PEROVSKIA ATRIPLICIFOLIA Bentham—(Figure 36). 2*n* = 20. Roadsides. From Asia.

Physostegia virginiana (Linnaeus) Bentham subsp. *virginiana*—Obedient-plant (Figure 36). 2*n* = 38. Roadsides, fields, streambanks, damp thickets, shores. [*P. virginiana* var. *granulosa* (Fassett) Fernald; *P. virginiana* var. *speciosa* (Sweet) A. Gray]

PRUNELLA VULGARIS Linnaeus subsp. *VULGARIS*—Heal-all (Figure 36). 2*n* = 28. Fields, roadsides, waste places. From Eurasia, northwestern Africa.

Prunella vulgaris Linnaeus subsp. *lanceolata* (W.P.C. Barton) Piper & Beattie—(Figure 36). 2*n* = 28. Open, moist woodlands, meadows, streambanks, fields, thickets, roadsides.

Pycnanthemum incanum (Linnaeus) Michaux var. *incanum*—(Figure 37). 2*n* = 76. Dry woodlands, thickets.

Pycnanthemum muticum (Michaux) Persoon—(Figure 37). 2*n* = ca. 108. Dry woodlands, thickets, clearings.

PYCNANTHEMUM PILOSUM Nuttall—(Figure 37). 2*n* = ? Woodland margins, thickets, dry knolls, sandy fields. From farther west.

Pycnanthemum tenuifolium Schrader—(Figure 37). 2*n* = 40. Dry fields, thickets, clearings, roadsides.

Pycnanthemum torreyi Bentham—(Figure 37). 2*n* = 78-80. Dry, rocky woodlands, dry, gravelly banks, meadows.

Pycnanthemum verticillatum (Michaux) Persoon—(Figure 37). 2*n* = 76-78. Woodlands, fields, meadows, thickets, clearings, usually in moist soil.

Pycnanthemum virginianum (Linnaeus) B.L. Robinson & Fernald—(Figure 37). 2*n* = 80. Fields, shores, meadows, woodlands, thickets, roadsides, usually in moist soil.

— *Pycnanthemum* hybrid —

Pycnanthemum × *clinopodioides* Torrey & A. Gray (*pro species*)—(Figure 37). [*P. incanum* (Linnaeus) Michaux × *P. verticillatum* (Michaux) Persoon]

SALVIA AZUREA Michaux *ex* Vahl var. *GRANDIFLORA* Bentham—Blue Sage (Figure 37). 2*n* = ? Waste places, sidewalks. From farther west. [*S. PITCHERI* Torrey *ex* Bentham]

SALVIA FARINACEA Bentham—Mealy-cup Sage (Figure 38). 2*n* = 18, 20. Roadsides. From south central United States.

Salvia lyrata Linnaeus—Cancerweed (Figure 38). 2*n* = 36. Meadows.

SALVIA OFFICINALIS Linnaeus—Garden Sage (Figure 38). 2*n* = 14. Roadsides, fields, fencerows, river thickets. From southeastern Europe.

SALVIA PRATENSIS Linnaeus—Meadow Sage (Figure 38). 2*n* = 16, 18, (32). Waste places, fields, grassy hillsides, roadsides. From Europe.

SALVIA SCLAREA Linnaeus—Clary Sage (Figure 38). 2*n* = 22. Waste places, fencerows. From Eurasia.

SALVIA SPLENDENS Sellow *ex* Nees—Scarlet Sage (Figure 38). 2*n* = 44. Waste places. From Brazil.

SALVIA SYLVESTRIS Linnaeus—(Figure 38). 2*n* = 14. Roadsides, fields. From Eurasia. [*S. NEMOROSA* Linnaeus]

SALVIA TILIIFOLIA Vahl—(Figure 38). 2*n* = 22. Waste places. From Mexico, Central and South America.

SALVIA VERTICILLATA Linnaeus—Lilac Sage (Figure 38). 2*n* = 16. Fields, meadows, waste places, roadsides. From Eurasia.

SATUREJA HORTENSIS Linnaeus—Summer Savory (Figure 39). 2*n* = 48. Waste places, fields, railroads, roadsides, gravelly banks. From Eurasia.

Scutellaria galericulata Linnaeus—Marsh Skullcap (Figure 39). 2*n* = 30, 32. Swamps, shores, meadows, marshes. [*S. epilobiifolia* A. Hamilton]

Scutellaria integrifolia Linnaeus—(Figure 39). 2*n* = 32. Fields, meadows.

Scutellaria lateriflora Linnaeus var. *lateriflora*—Mad-dog Skullcap (Figure 39). 2*n* = 80, 88. Wet woodlands, shores, meadows, alluvial thickets, marshes.

Scutellaria parvula Michaux var. *parvula*—(Figure 39). 2*n* = 20. Rocky outcrops of shores and fields.

Scutellaria parvula Michaux var. *missouriensis* (Torrey) Goodman & C.A. Lawson—(Figure 39). 2*n* = ? Rocky outcrops of shores, fields, ridges, hills, and open woodlands. [*S. parvula* var. *leonardi* (Epling) Fernald]

— *Scutellaria* hybrid —

Scutellaria × *churchilliana* Fernald (*pro species*) (Figure 39). [*S. galericulata* Linnaeus × *S. lateriflora* Linnaeus]

SIDERITIS MONTANA Linnaeus (Figure 39). 2*n* = 16, 32. Waste places, dry, open ground. From Eurasia, northwestern Africa.

STACHYS ANNUA (Linnaeus) Linnaeus (Figure 39). 2*n* = 34. Waste places. From Eurasia.

STACHYS ARVENSIS (Linnaeus) Linnaeus Staggerweed (Figure 40). 2*n* = 10. Waste places. From Eurasia, northwestern Africa.

STACHYS ASPERA Michaux (Figure 40). 2*n* = ca. 60, 68. Roadsides. From farther south and west. [*S. HYSSOPIFOLIA* Michaux var. *AMBIGUA* A. Gray]

STACHYS BYZANTINA K. Koch Lamb's-ears (Figure 40). 2*n* = 30. Waste places, fields, swamp margins. From Caucasus region.

STACHYS GERMANICA Linnaeus (Figure 40). 2*n* = 30. Waste places. From Eurasia, northwestern Africa.

Stachys hispida Pursh (Figure 40). 2*n* = 68. Meadows, swamps, low woodlands, shores, damp thickets. [*S. tenuifolia* Willdenow var. *hispida* (Pursh) Fernald; *S. tenuifolia* Willdenow var. *platyphylla* misapplied]

Stachys hyssopifolia Michaux (Figure 40). 2*n* = 34. Sandy pond shores.

STACHYS PALUSTRIS Linnaeus Woundwort (Figure 40). 2*n* = 64, 96, 102. Shores, damp thickets, wet roadsides, low meadows, waste places. From Eurasia. [*S. PALUSTRIS* var. *ELLIPTICA* Clos; *S. PALUSTRIS* var. *SEGETUM* (Mutel) Grognier]

Stachys pilosa Nuttall var. *pilosa* (Figure 40). 2*n* = 64. Shores, meadows, fields, low grounds. [*S. palustris* Linnaeus var. *homotricha* Fernald; *S. palustris* var. *nipigonensis* Jennings; *S. palustris* var. *pilosa* (Nuttall) Fernald]

STACHYS PILOSA Nuttall var. *ARENICOLA* (Britton) G.A. Mulligan & D.B. Munro (Figure 40). 2*n* = 68. Wet grounds. From farther west.

TEUCRIUM BOTRYS Linnaeus Cut-leaf Germander (Figure 41). 2*n* = 32. Dry or rocky fields, often calcareous. From Europe.

Teucrium canadense Linnaeus var. *canadense* American Germander (Figure 41). 2*n* = 32. Salt marsh margins, wet woodlands, shores, wet thickets. [*T. canadense* var. *virginicum* (Linnaeus) Eaton]

Teucrium canadense Linnaeus var. *occidentale* (A. Gray) E.M. McClintock & Epling (Figure 41). 2*n* = ? Alluvial soil, shores. [*T. occidentale* A. Gray var. *occidentale*; *T. occidentale* A. Gray var. *boreale* (E.P. Bicknell) Fernald]

TEUCRIUM SCORODONIA Linnaeus Wood Germander (Figure 41). 2*n* = 32, (34). Open woodlands. From Europe, northwestern Africa.

THYMUS PULEGIOIDES Linnaeus—Lemon Thyme (Figure 41). 2*n* = 28. Dry fields, roadsides, waste places. From Europe. [*T. SERPYLLUM* misapplied]

Trichostema brachiatum Linnaeus—False Pennyroyal (Figure 41). 2*n* = 14. Woodland borders, hillsides, ledges, in dry, often calcareous, soil. [*Isanthus brachiatus* (Linnaeus) Britton, Sterns & Poggenburg]

Trichostema dichotomum Linnaeus—Bluecurls (Figure 41). 2*n* = 38. Dry, open, sandy soil, waste places, roadsides, fields.

Trichostema setaceum Houttuyn—(Figure 41). 2*n* = 38. Dry sands.

LINACEAE

LINUM CATHARTICUM Linnaeus—Fairy Flax (Figure 41). 2*n* = 16. Fields, roadsides, in calcareous or sandy soil. From Eurasia, northwestern Africa.

Linum intercursum E.P. Bicknell—(Figure 42). 2*n* = 36. Sandy beaches, open, sandy places.

Linum medium (Planchon) Britton var. *texanum* (Planchon) Fernald—(Figure 42). 2*n* = 36. Dry fields, roadsides, in sterile, open soil.

LINUM PERENNE Linnaeus—Blue Flax (Figure 42). 2*n* = 18, 36. Dry, sandy hills. From Eurasia.

Linum striatum Walter—(Figure 42). 2*n* = 36. Damp thickets, bogs, meadows, shores. [*L. striatum* var. *multijugum* Fernald]

Linum sulcatum Riddell—(Figure 42). 2*n* = 30. Roadsides, sandy fields, in dry, open soil.

LINUM USITATISSIMUM Linnaeus—Common Flax (Figure 42). 2*n* = 30. Railroads, waste places, fields, roadsides. From Eurasia.

Linum virginianum Linnaeus—(Figure 42). 2*n* = 36. Roadsides, dry, open woodlands, fields, thickets, clearings.

RADIOLA LINOIDES Roth—(Figure 42). 2*n* = 18. Grassy turf bordering rocky beaches, pastures. From Eurasia, northern and central Africa. [*LINUM RADIOLA* Linnaeus; *MILLEGRANA RADIOLA* (Linnaeus) Druce]

LOASACEAE

MENTZELIA OLIGOSPERMA Nuttall *ex* Sims—(Figure 42). 2*n* = 22. Wool waste. From farther west.

LYTHRACEAE

CUPHEA PROCUMBENS Ortega—(Figure 43). 2*n* = 18. Pastures. From southern Mexico.

Cuphea viscosissima Jaquin—Blue Waxweed (Figure 43). $2n = 12$. Fields, roadsides. [*C. petiolata* Pohl *ex* Koehne]

Decodon verticillatus (Linnaeus) Elliott—Swamp Loosestrife (Figure 43). $2n = 32$. Pond and bog margins, shores, swamps, usually in shallow water. [*D. verticillatus* var. *laevigatus* Torrey & A. Gray]

LYTHRUM ALATUM Pursh var. *ALATUM*—Winged Loosestrife (Figure 43). $2n = 20$. Meadows, moist fields, streambanks, swamps, roadsides. From farther west and south.

Lythrum hyssopifolia Linnaeus—(Figure 43). $2n = 20$. Salt marsh margins, moist dune hollows.

LYTHRUM JUNCEUM Banks & Solander—(Figure 43). $2n = 10$. Sandy streambanks. From Mediterranean region.

LYTHRUM SALICARIA Linnaeus—Purple Loosestrife (Figure 43). $2n = 30, 60$. River meadows, swamps, marshes, shores, wet roadsides. From Eurasia, northwestern Africa. [*L. SALICARIA* var. *GRACILIOR* Turczaninow; *L. SALICARIA* var. *TOMENTOSUM* (Miller) de Candolle]

Rotala ramosior (Linnaeus) Koehne—Tooth-cup (Figure 43). $2n = 16$. Sandy or muddy shores of ponds and streams.

TRAPA NATANS Linnaeus—Water-chestnut (Figure 43). $2n = 44, 46, 48, 90$. Quiet streams, ponds. From Eurasia, Africa.

MELASTOMATACEAE

Rhexia mariana Linnaeus var. *mariana*—(Figure 44). $2n = 22, 44$. Pond shores.

Rhexia virginica Linnaeus—Common Meadow-beauty (Figure 44). $2n = 22, 44$. Peaty meadows, pond shores.

NYSSACEAE

Nyssa sylvatica Marshall—Black Tupelo (Figure 44). $2n = 44$. Swamps, shores, low, acidic woodlands.

OLEACEAE

CHIONANTHUS VIRGINICUS Linnaeus—Fringe-tree (Figure 44). $2n = 46$. Roadsides, woodland margins. From farther west and south.

FORSYTHIA SUSPENSA (Thunberg) Vahl—Weeping Forsythia (Figure 44). $2n = 24, 28$. Roadsides, woodland margins, railroads. From China. [*F. SUSPENSA* var. *FORTUNEI* (Lindley) Rehder]

FORSYTHIA VIRIDISSIMA Lindley (Figure 44). $2n = 28$. Roadsides, damp thickets, streambanks. From China, Korea.

Forsythia hybrid

FORSYTHIA × *INTERMEDIA* Zabel (*pro species*) (Figure 44). [parentage of current specimens uncertain, although parentage of the type specimen is *F. SUSPENSA* (Thunberg) Vahl × *F. VIRIDISSIMA* Lindley]

Fraxinus americana Linnaeus—White Ash (Figure 44). $2n = 46$. Rich woodlands, roadsides.

FRAXINUS EXCELSIOR Linnaeus—European Ash (Figure 44). $2n = 46$. Roadsides, wooded streambanks. From Eurasia.

Fraxinus nigra Marshall—Black Ash (Figure 45). $2n = 46$. Swamps, wet woodlands, shores.

Fraxinus pennsylvanica Marshall—Red Ash (Figure 45). $2n = 46$. Shores, swamps, alluvial woodlands. [*F. pennsylvanica* var. *austinii* Fernald; *F. pennsylvanica* var. *subintegerrima* (Vahl) Fernald]

LIGUSTRUM OBTUSIFOLIUM Siebold & Zuccarini subsp. *OBTUSIFOLIUM*—(Figure 45). $2n = 46$. Woodlands, woodland margins, thickets, roadsides, streambanks. From Japan, Korea.

LIGUSTRUM OBTUSIFOLIUM Siebold & Zuccarini subsp. *SUAVE* (Kitagawa) Kitagawa—Amur Privet (Figure 45). $2n = 46$. Thickets. From China. [*L. AMURENSE* Carrière]

LIGUSTRUM OVALIFOLIUM Hasskarl—California Privet (Figure 45). $2n = 46$. Roadsides, thickets, sandy, waste places. From Japan, Korea.

LIGUSTRUM SINENSE Loureiro—Chinese Privet (Figure 45). $2n = 46$. Railroads. From eastern Asia.

LIGUSTRUM VULGARE Linnaeus—Common Privet (Figure 45). $2n = 46$. Roadsides, thickets, open woodlands. From Eurasia, northwestern Africa.

SYRINGA RETICULATA (Blume) H. Hara subsp. *RETICULATA*—Japanese Tree Lilac (Figure 45). $2n = ?$ Roadsides, woodland margins. From Japan.

SYRINGA VILLOSA Vahl—(Figure 45). $2n = 46$. Wooded bank. From China.

SYRINGA VULGARIS Linnaeus—Common Lilac (Figure 46). $2n = 38, 44, 46$. Roadsides, woodland margins. From southeastern Europe.

Syringa hybrids

SYRINGA × *CHINENSIS* Willdenow (*pro species*)—(Figure 46). [*S.* × *PERSICA* Linnaeus × *S. VULGARIS* Linnaeus]

SYRINGA × *PERSICA* Linnaeus (*pro species*)—(Figure 46). [*S. PROTOLACINIATA* P.S. Green & M.C. Chang × *S. VULGARIS* Linnaeus]

ONAGRACEAE

CAMISSONIA CAMPESTRIS (Greene) P.H. Raven subsp. *CAMPESTRIS*—Mojave Suncup (Figure 46). 2*n* = ? Wool waste. From southwestern United States.

CAMISSONIOPSIS BISTORTA (Nuttall *ex* Torrey & A. Gray) W.L. Wagner & Hoch—California Suncup (Figure 46). 2*n* = ? Wool waste. From southern California.

Chamaenerion angustifolium (Linnaeus) Scopoli subsp. *circumvagum* (Mosquin) Moldenke—Fireweed (Figure 46). 2*n* = 72 Burned woodlands, recent clearings, thickets, roadsides, fields. [*Chamerion angustifolium* (Linnaeus) Holub subsp. *circumvagum* (Mosquin) Hoch; *Epilobium angustifolium* Linnaeus var. *angustifolium* misapplied; *E. angustifolium* var. *canescens* Alph. Wood]

Circaea alpina Linnaeus subsp. *alpina*—Smaller Enchanter's Nightshade (Figure 46). 2*n* = 22. Swampy or springy woodlands, streambanks.

Circaea canadensis (Linnaeus) Hill—Common Enchanter's Nightshade (Figure 46). 2*n* = 22. Rich, moist woodlands. [*C. lutetiana* Linnaeus var. *canadensis* Linnaeus; *C. quadrisulcata* (Maximowicz) Franchet & Savatier var. *canadensis* (Linnaeus) H. Hara]

—*Circaea* hybrid—

Circaea × *sterilis* Boufford—(Figure 46). [*C. alpina* Linnaeus × *C. canadensis* (Linnaeus) Hill]

CLARKIA PULCHELLA Pursh—(Figure 47). 2*n* = ? Fields, meadows, waste places. From northwestern United States.

CLARKIA RHOMBOIDEA Douglas—(Figure 47). 2*n* = 24. Wool waste. From western United States.

Epilobium anagallidifolium Lamarck—(Figure 47). 2*n* = 36. Alpine areas. [*E. alpinum* Linnaeus, rejected name, in part]

Epilobium ciliatum Rafinesque subsp. *ciliatum*—(Figure 47). 2*n* = 36. Wet, open woodlands, damp thickets and fields, shores, marshes. [*E. glandulosum* Lehmann var. *adenocaulon* (Haussknecht) Fernald]

Epilobium ciliatum Rafinesque subsp. *glandulosum* (Lehmann) Hoch & P.H. Raven—(Figure 47). 2*n* = ? Damp thickets. [*E. glandulosum* Lehmann var. *cardiophyllum* Fernald; *E. glandulosum* var. *occidentale* (Trelease) Fernald]

Epilobium coloratum Biehler—Eastern Willow-herb (Figure 47). 2*n* = 36. Swamps, boggy thickets, springy slopes, shores, marshes.

EPILOBIUM HIRSUTUM Linnaeus—(Figure 47). 2*n* = 36. Waste places, roadside thickets, meadows. From Eurasia, Africa.

Epilobium hornemannii Reichenbach subsp. *hornemannii*—(Figure 47). 2*n* = 36. Margins of brooks, damp rocks, at high altitudes, often in wet moss.

Epilobium lactiflorum Haussknecht (Figure 47). 2*n* = 36. Alpine areas. [*E. alpinum* Linnaeus, rejected name, in part]

Epilobium leptophyllum Rafinesque—(Figure 48). 2*n* = 36. Bogs, swamps, meadows, marshes.

Epilobium palustre Linnaeus—(Figure 48). 2*n* = 36. Bogs, swamps, meadows, swales. [*E. palustre* var. *grammadophyllum* Haussknecht; *E. palustre* var. *labradoricum* Haussknecht; *E. palustre* var. *oliganthum* (Michaux) Fernald]

Epilobium strictum Muhlenberg *ex* Sprengel—(Figure 48). 2*n* = 36. Bogs, swamps, meadows, mossy thickets, marshes, shores.

Ludwigia alternifolia Linnaeus—Seedbox (Figure 48). 2*n* = 16. Pond and stream shores, swamps, marshes.

Ludwigia palustris (Linnaeus) Elliott—Common Water-purslane (Figure 48). 2*n* = 16. Pond and stream shores, swamps. [*L. palustris* var. *americana* (de Candolle) Fernald & Griscom]

Ludwigia polycarpa Short & R. Peter—(Figure 48). 2*n* = 32. Pond and stream shores.

Ludwigia sphaerocarpa Elliott—(Figure 48). 2*n* = 32. Pond and stream shores, marshes. [*L. sphaerocarpa* var. *macrocarpa* Fernald & Griscom]

—*Ludwigia* hybrid

Ludwigia × *lacustris* Eames (*pro species*) (Figure 48). [*L. BREVIPES* (Long) Eames × *L. palustris* (Linnaeus) Elliott]

OENOTHERA AFFINIS Cambessèdes—(Figure 48). 2*n* = ? Waste places. From South America.

Oenothera biennis Linnaeus—Common Evening-Primrose (Figure 49). 2*n* = 14. Roadsides, fields, waste places, river thickets. [*O. biennis* var. *pycnocarpa* (G.F. Atkinson & Bartlett) Wiegand]

OENOTHERA CURTIFLORA W.L. Wagner & Hoch—(Figure 49). 2*n* = 14. Waste places. From farther west. [*GAURA PARVIFLORA* Douglas *ex* Lehmann]

Oenothera fruticosa Linnaeus subsp. *fruticosa*—Southern Sundrops (Figure 49). 2*n* = 56. Salt marsh margins, meadows, swamps, fields. [*O. fruticosa* var. *eamesii* (B.L. Robinson) S.F. Blake; *O. fruticosa* var. *humifusa* Allen; *O. fruticosa* var. *linearis* (Michaux) S. Watson; *O. tetragona* Roth var. *longistipata* (Pennell) Munz]

Oenothera fruticosa Linnaeus subsp. *tetragona* (Roth) W.L. Wagner—(Figure 49). 2*n* = 28. Gravelly, sandy eskers, dry fields and banks, woodland margins, waste places. [*O. fruticosa* Linnaeus subsp. *glauca* (Michaux) Straley; *O. tetragona* Roth var. *tetragona*]

OENOTHERA GAURA W.L. Wagner & Hoch—(Figure 49). 2*n* = 14. Roadsides, waste places, dry thickets. From farther south and west. [*GAURA BIENNIS* Linnaeus]

OENOTHERA GLAZIOVIANA Micheli—(Figure 49). 2*n* = 14. Roadsides, waste places, fields. From farther south and west. [*O. ERYTHROSEPALA* Borbás]

OENOTHERA GRANDIFLORA L'Héritier (Figure 49). 2*n* = 14. Roadsides, waste places. From farther south. [*O. BIENNIS* Linnaeus var. *GRANDIFLORA* (L'Héritier *ex* Aiton) Torrey & A. Gray]

OENOTHERA GRANDIS (Britton) Smyth (Figure 49). 2*n* = 14. Fields. From farther west.

OENOTHERA LACINIATA Hill (Figure 49). 2*n* = 14. Waste places, roadsides, fields, usually in dry, sandy, open soil. From farther south and west.

Oenothera nutans G.F. Atkinson & Bartlett (Figure 50). 2*n* = 14. River thickets. [*O. biennis* Linnaeus var. *nutans* (G.F. Atkinson & Bartlett) Wiegand]

Oenothera oakesiana (A. Gray) J.W. Robbins *ex* S. Watson & J.M. Coulter (Figure 50). 2*n* = 14. Open, sandy areas of beaches, dunes, roadsides and fields. [*O. cruciata* Nuttall *ex* G. Don var. *stenopetala* (E.P. Bicknell) Fernald; *O. parviflora* Linnaeus var. *angustissima* (R.R. Gates) Wiegand; *O. parviflora* Linnaeus var. *oakesiana* (A. Gray) Fernald)]

Oenothera parviflora Linnaeus (Figure 50). 2*n* = 14. Streambanks, thickets, roadsides, railroads, fields, dry sand or gravel. [*O. biennis* Linnaeus var. *cruciata* (Nuttall *ex* G. Don) Torrey & A. Gray; *O. cruciata* Nuttall *ex* G. Don var. *cruciata*]

Oenothera perennis Linnaeus—Little Sundrops (Figure 50). 2*n* = 14. Dry fields, clearings, roadsides, waste places, meadows.

OENOTHERA PILOSELLA Rafinesque—(Figure 50). 2*n* = 56. Dry woodlands, fields, roadsides, rocky shores, waste places. From farther west and south.

OENOTHERA SERRULATA Nuttall (Figure 50). 2*n* = 14. Railroads. From farther west. [*CALYLOPHUS SERRULATUS* (Nuttall) P.H. Raven]

OENOTHERA SPECIOSA Nuttall—White Evening-Primrose (Figure 50). 2*n* = 14. Waste places, roadsides. From farther west and south.

OENOTHERA VILLOSA Thunberg subsp. *VILLOSA* (Figure 50). 2*n* = 14. Fields, roadsides, waste places, beaches. From farther west. [*O. DEPRESSA* Greene]

OXALIDACEAE

OXALIS CORNICULATA Linnaeus—Creeping Wood-Sorrel (Figure 50). 2*n* = 24, 44. Waste places, roadsides, fields. From unknown origin.

Oxalis dillenii Jacquin (Figure 51). 2*n* = 18, 20, 22, 20-24. Dry fields, sandy thickets, woodland margins, roadsides, waste areas. [*O. filipes* Small; *O. florida* Salisbury; *O. stricta* misapplied]

Oxalis montana Rafinesque—Mountain Wood-Sorrel (Figure 51). 2*n* = 22. Rich, damp woodlands. [*O. acetosella* misapplied]

Oxalis stricta Linnaeus (Figure 51). 2*n* = 18, 24. Waste places, roadsides, fields. [*O. europaea* Jordan var. *europaea*; *O. europaea* var. *bushii* (Small) Wiegand]

Oxalis violacea Linnaeus—Violet Wood-Sorrel (Figure 51). 2*n* = 28. Rich, moist woodlands, rocky slopes. [*O. violacea* var. *trichophora* Fassett]

Oxalis hybrid

Oxalis dillenii Jacquin × *O. stricta* Linnaeus (Figure 51).

POLEMONIACEAE

COLLOMIA LINEARIS Nuttall—(Figure 51). 2*n* = 16. Railroads, meadows, waste places, wool waste. From farther west.

GILIA ACHILLEIFOLIA Bentham subsp. *MULTICAULIS* V.D. Grant & A.D. Grant (Figure 51). 2*n* = 18. Waste places. From California.

GILIA INTERIOR (H. Mason & A.D. Grant) A.D. Grant—(Figure 51). 2*n* = 18. Wool waste. From California.

GILIA TRICOLOR Bentham subsp. *DIFFUSA* (Congdon) H. Mason & A.D. Grant—(Figure 51). 2*n* = 18 Waste places. From California.

IPOMOPSIS RUBRA (Linnaeus) Wherry Standing-cypress (Figure 52). 2*n* = 14. Sandy soil. From farther south and west. [*GILIA RUBRA* (Linnaeus) A. Heller]

NAVARRETIA LEUCOCEPHALA Bentham subsp. *MINIMA* (Nuttall) A.G. Day—(Figure 52). 2*n* = 18. Wool waste. From western United States.

PHLOX BIFIDA L.C. Beck subsp. *BIFIDA*—Sand Phlox (Figure 52). 2*n* = ? Shaded, sandy soil near cemetery. From farther west.

Phlox divaricata Linnaeus subsp. *divaricata*—Wild Blue Phlox (Figure 52). 2*n* = 14. Damp, rocky, rich woodlands, waste places.

Phlox maculata Linnaeus subsp. *maculata*—Wild Sweet William (Figure 52). 2*n* = 14. Meadows, alluvial woodlands, streambanks, swamps, roadsides.

PHLOX PANICULATA Linnaeus—Fall Phlox (Figure 52). 2*n* = 14. Roadsides, woodland margins, fields, thickets. From farther west and south.

Phlox pilosa Linnaeus subsp. *pilosa* (Figure 52). 2*n* = 14. Moist, grassy banks, dry knolls.

PHLOX STOLONIFERA Sims—Creeping Phlox (Figure 52). 2*n* = 24. Cemeteries, roadsides. From farther south.

PHLOX SUBULATA Linnaeus subsp. *SUBULATA*—Moss Phlox (Figure 52). 2*n* = 14. Cemeteries, sandy fields and roadsides, waste places. From farther west and south.

— *Phlox* hybrid

PHLOX × *PROCUMBENS* Lehmann (*pro species*) — (Figure 53). [*P. STOLONIFERA* Sims × *O. SUBULATA* Linnaeus]

POLEMONIUM CAERULEUM Linnaeus subsp. *CAERULEUM* — Charity (Figure 53). 2*n* 18. Cemeteries, roadsides, waste places. From Eurasia.

POLEMONIUM REPTANS Linnaeus var. *REPTANS* (Figure 53). 2*n* 18. Fields, roadsides, marshes, swamps. From farther west and south.

Polemonium vanbruntiae Britton — (Figure 53). 2*n* 18. Bogs, swamps.

POLYGALACEAE

Polygala ambigua Nuttall — (Figure 53). 2*n* — ? Open woodlands, fields, plains, roadsides, often in sandy soil. [*P. verticillata* Linnaeus var. *ambigua* (Nuttall) Alph. Wood]

Polygala cruciata Linnaeus var. *aquilonia* Fernald & B.G. Schubert — (Figure 53). 2*n* — ? Meadows, pond shores. marshes, usually in peaty or sandy soil.

Polygala nuttallii Torrey & A. Gray — (Figure 53). 2*n* — 46. Dry, sandy fields, open woodlands, railroads, and other dry, sandy open soil.

Polygala paucifolia Willdenow Fringed Polygala (Figure 53). 2*n* 34. Woodlands, woodland margins, in rich, light soil. [*Polygaloides paucifolia* (Willdenow) J.R. Abbott]

Polygala polygama Walter — (Figure 53). 2*n* 56. Fields, woodlands, openings, in dry, sandy soil. [*P. polygama* var. *obtusata* Chodat]

Polygala sanguinea Linnaeus — (Figure 54). 2*n* — ? Fields, meadows, other, moist, open, acid soils.

Polygala senega Linnaeus Seneca-Snakeroot (Figure 54). 2*n* — 34. River terraces, dry woodlands, dry rocky or gravelly areas, usually in calcareous soil.

Polygala verticillata Linnaeus var. *verticillata* (Figure 54). 2*n* — 34. Fields, open, rocky areas, roadsides, railroads, in sterile, open soil. [*P. verticillata* var. *isocycla* Fernald]

RHAMNACEAE

Ceanothus americanus Linnaeus — New Jersey Tea (Figure 54). 2*n* 24. Thickets, open woodlands, rocky or gravelly banks, roadsides, in dry, open soil. [*C. americanus* var. *intermedius* (Pursh) Torrey & A. Gray]

Ceanothus herbaceus Rafinesque—Prairie Redroot (Figure 54). 2*n* 24. Lake shores, fields, in dry, open, sandy soil. [*C. ovatus* Desfontaines]

FRANGULA ALNUS Miller—Glossy Buckthorn (Figure 54). 2*n* = 20. Woodlands, thickets, roadsides, fields, ledge crevices. From Eurasia, northwestern Africa. [*RHAMNUS FRANGULA* Linnaeus]

Rhamnus alnifolia L'Héritier—American Alder Buckthorn (Figure 54). 2*n* = 24. Bogs, swamps, damp thickets, often with *Thuja*.

RHAMNUS CATHARTICA Linnaeus—Common Buckthorn (Figure 54). 2*n* = 24. Hedgerows, thickets, roadsides, fields, open woodlands. From Eurasia, northwestern Africa.

RHAMNUS DAVURICA Pallas subsp. *DAVURICA* (Figure 54). 2*n* = 24. Roadsides, woodlands. From eastern Asia. [*R. CITRIFOLIA* misapplied]

RUTACEAE

DICTAMNUS ALBUS Linnaeus—Gas Plant (Figure 55). 2*n* = 36. Ledges, woodlands. From Eurasia.

PHELLODENDRON AMURENSE Ruprecht—Amur Corktree (Figure 55). 2*n* = 28, ca. 66, 78, ca. 80. Woodlands, roadsides, swamps, pond shores. From eastern Asia. [*P. JAPONICUM* Maximowicz; *P. SACHALINENSE* (F. Schmidt) Sargent]

PTELEA TRIFOLIATA Linnaeus subsp. *TRIFOLIATA*—Common Hoptree (Figure 55). 2*n* = 42. Woodland margins, roadsides, waste places. From farther south and west.

RUTA GRAVEOLENS Linnaeus—Common Rue (Figure 55). 2*n* = 72, 76, 78, 80, 81. Waste places. From eastern Europe.

Zanthoxylum americanum Miller—Northern Prickly-Ash (Figure 55). 2*n* = 68, 136. Thickets, rocky fields, rich woodlands, streambanks, meadows, roadsides.

SAPINDACEAE

ACER CAMPESTRE Linnaeus—Hedge Maple (Figure 55). 2*n* = 26. Hedgerows, roadsides. From Eurasia, northwestern Africa.

ACER GINNALA Maximowicz—Amur Maple (Figure 55). 2*n* = 26. Woodland and field margins, roadsides. From eastern Asia.

Acer negundo Linnaeus var. *negundo*—Ashleaf Maple (Figure 55). 2*n* = 26. Roadsides, waste places, streambanks, alluvial woodlands, railroad margins.

ACER NEGUNDO Linnaeus var. *VIOLACEUM* Booth *ex* G. Kirchner—(Figure 55). 2*n* = ? Roadsides, waste places, woodland margins, streambanks. From farther west.

Acer nigrum F. Michaux—Black Maple (Figure 56). 2*n* = 26. Rich, calcareous or alluvial woodlands.

Acer pensylvanicum Linnaeus—Striped Maple (Figure 56). 2*n* = 26. Moist, rich woodlands.

ACER PLATANOIDES Linnaeus—Norway Maple (Figure 56). 2*n* = 26. Roadsides, hedgerows, waste places, woodland margins. From Eurasia.

ACER PSEUDOPLATANUS Linnaeus—Sycamore Maple (Figure 56). 2*n* = 52. Roadsides, fencerows, waste places, woodland margins, streambanks. From Eurasia.

Acer rubrum Linnaeus var. *rubrum*—Red Maple (Figure 56). 2*n* = 26. Acidic woodlands, swamps, alluvial soils, shores, moist fields.

Acer rubrum Linnaeus var. *trilobum* K. Koch—(Figure 56). 2*n* = ? Swamps, low woodlands.

Acer saccharinum Linnaeus—Silver Maple (Figure 56). 2*n* = 52. Streambanks, alluvial soils, swamps.

Acer saccharum Marshall—Sugar Maple (Figure 56). 2*n* = 26. Rich woodlands, especially in calcareous soils.

Acer spicatum Lamarck—Mountain Maple (Figure 56). 2*n* = 26. Rich, moist woodlands.

ACER TATARICUM Linnaeus—Tatarian Maple (Figure 57). 2*n* = 26. Roadsides. From Eurasia.

—*Acer* hybrid—

Acer × *freemanii* A.E. Murray—(Figure 57). [*A. rubrum* Linnaeus × *A. saccharinum* Linnaeus]

AESCULUS GLABRA Willdenow var. *GLABRA*—Ohio Buckeye (Figure 57). 2*n* = 40. Woodlands. From farther west and south.

AESCULUS HIPPOCASTANUM Linnaeus—Horse-chestnut (Figure 57). 2*n* = 40. Roadsides, waste places, woodland margins. From southeastern Europe.

SIMAROUBACEAE

AILANTHUS ALTISSIMA (Miller) Swingle—Tree-of-heaven (Figure 57). 2*n* = 80. Roadsides, waste places, woodland margins, fields. From China, Taiwan.

STAPHYLACEAE

Staphylea trifolia Linnaeus—American Bladdernut (Figure 57). 2*n* = 78. Rich woodland margins, thickets, roadsides.

VERBENACEAE

GLANDULARIA PULCHELLA (Sweet) Troncoso—(Figure 57). 2*n* = ? Waste places. From South America. [*VERBENA PULCHELLA* Sweet; *V. TENUISECTA* Briquet]

VERBENA BONARIENSIS Linnaeus—(Figure 57). 2*n* = 12, 14, 28. Gravel pit. From South America. [*V. BONARIENSIS* var. *CONGLOMERATA* Briquet]

VERBENA BRACTEATA Lagasca & Rodríguez—(Figure 57). 2*n* = 14, 28. Waste places, fields, roadsides, in open, sandy soils. From farther west.

Verbena hastata Linnaeus—Simpler's-joy (Figure 58). 2*n* = 14. Wet thickets, shores, marshes, meadows, fields, roadsides.

VERBENA HISPIDA Ruiz & Pavón—(Figure 58). 2*n* = ? Waste places. From South America.

VERBENA OFFICINALIS Linnaeus—European Vervain (Figure 58). 2*n* = 14, 28, 42, 56. Waste places. From Eurasia.

Verbena simplex Lehmann—(Figure 58). 2*n* = 14. Dry fields, roadsides, railroads, rocky places, sandplains.

VERBENA STRICTA Ventenat—Hoary Vervain (Figure 58). 2*n* = 14. Dry fields, roadsides, waste places. From farther west.

Verbena urticifolia Linnaeus—White Vervain (Figure 58). 2*n* = 14. Rich thickets and woodland margins, alluvial soil, streambanks, meadows, fields, roadsides, waste places. [*V. urticifolia* var. *leiocarpa* L.M. Perry & Fernald]

Verbena hybrids

Verbena × *blanchardii* Moldenke—(Figure 58). [*V. hastata* Linnaeus × *V. simplex* Lehmann]

Verbena × *engelmanii* Moldenke—(Figure 58). [*V. hastata* Linnaeus × *V. urticifolia* Linnaeus]

VERBENA × *RYDBERGII* Moldenke—(Figure 58). [*V. hastata* Linnaeus × *V. STRICTA* Ventenat]

VISCACEAE

Arceuthobium pusillum Peck—Dwarf Mistletoe (Figure 59). 2*n* = 28. Parasitic on *Picea*, rarely on *Larix* or *Pinus strobus*.

VITACEAE

AMPELOPSIS CORDATA Michaux—Raccoon-grape (Figure 59). 2*n* = 40. Roadside thickets, salt marsh margins, sandy waste places. From farther south and west.

AMPELOPSIS GLANDULOSA (Wallich) Momiyama—Porcelain-berry (Figure 59). 2*n* = 20. Roadsides, thickets, woodlands, waste places. From China. [*A. GLANDULOSA* var. *BREVIPEDUNCULATA* (Maximowicz) Momiyama; *A. BREVIPEDUNCULATA* (Maximowicz) Trautvetter]

Parthenocissus quinquefolia (Linnaeus) Planchon — Virginia-creeper (Figure 59). $2n = 40$. Thickets, roadsides, woodlands, rocky banks, stone walls, fences. [*P. quinquefolia* var. *hirsuta* (Pursh) Planchon; *P. inserta* (A. Kerner) Fritsch]

PARTHENOCISSUS TRICUSPIDATA (Siebold & Zuccarini) Planchon — Boston Ivy (Figure 59). $2n = 40$. Roadsides, fields, woodland margins, old walls. From eastern Asia.

Parthenocissus vitacea (Knerr) Hitchcock — Thicket-creeper (Figure 59). $2n = 40$. Thickets, streambanks roadsides, woodlands, rocky banks. [*P. inserta* misapplied]

Vitis aestivalis Michaux — Summer Grape (Figure 59). $2n = 38$. Open woodlands, thickets, roadsides, rocky outcrops and slopes. [*V. aestivalis* var. *argentifolia* (Munson *ex* L.H. Bailey) Fernald; *V. aestivalis* var. *bicolor* Deam]

Vitis labrusca Linnaeus — Fox Grape (Figure 59). $2n = 38$. Thickets, streambanks, open woodlands, woodland and pond margins, roadsides.

VITIS PALMATA Vahl — Catbird Grape (Figure 59). $2n = 38$. Railroads. From farther south and west.

Vitis riparia Michaux — Riverbank Grape (Figure 60). $2n = 38$. Streambanks, alluvial woodlands, meadows, roadsides, rich thickets. [*V. riparia* var. *syrticola* (Fernald & Wiegand) Fernald; *V. VULPINA* misapplied]

VITIS VINIFERA Linnaeus — Wine Grape (Figure 60). $2n = 38, 40, 76$. Waste places. From Eurasia, northwestern Africa.

VITIS VULPINA Linnaeus — Winter Grape (Figure 60). $2n = 38$. Roadsides, thickets. From farther south and west.

— *Vitis* hybrids —

VITIS × *LABRUSCANA* L.H. Bailey — (Figure 60). [*V. labrusca* Linnaeus × *VITIS* spp.]

Vitis × *novae-angliae* Fernald (*pro species*) — (Figure 60). [*V. labrusca* Linnaeus × *V. riparia* Michaux]

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LITERATURE CITED & CONSULTED

(general references listed in our previous articles are not repeated here)

Angelo, R. 1994. A computer method for producing dot distribution maps. Rhodora 96: 190 194.

Angelo, R. and D.E. Boufford. 1996. Atlas of the flora of New England: Pteridophytes and gymnosperms. Rhodora 98: 1–79.

Angelo, R. and D.E. Boufford. 1998. Atlas of the flora of New England: Poaceae. Rhodora 100: 101–233.

Angelo, R. and D.E. Boufford. 2000. Atlas of the flora of New England: Monocots except Poaceae and Cyperaceae. Rhodora 102: 1–119.

Angelo, R. and D.E. Boufford. 2007. Atlas of the flora of New England: Cyperaceae. Rhodora 109: 237 360.

Angelo, R. and D.E. Boufford. 2010. Atlas of the flora of New England: Magnoliidae & Hamamelidae. Rhodora 112: 244 326.

Angelo, R. and D.E. Boufford. 2011a. Atlas of the flora of New England: Salicaceae to Brassicaceae. Phytoneuron 2011–12: 1 12 + figs. 1 53 (maps).

Angelo, R. and D.E. Boufford. 2011b. Atlas of the flora of New England: Paeoniaceae to Ericaceae. Phytoneuron 2011–53: 1 13 + figs. 1 18 (maps).

Angelo, R. and D.E. Boufford. 2011c. Atlas of the flora of New England: Pteridophytes and Gymnosperms: Introduction. <http neatlas org/Intro-Pterıd&Gym html>

Angelo, R. and D.E. Boufford. 2012a. Atlas of the flora of New England: Caryophyllidae. Rhodora 113: 419–513.

Angelo, R. and D.E. Boufford. 2012b. Atlas of the flora of New England: Asteraceae. Phytoneuron 2012 34: 1–39 + figs. 1–56 (maps).

Angelo, R. and D.E. Boufford. 2012c. Atlas of the flora of New England: Rosaceae. Phytoneuron 2012–81: 1–25 + figs. 1–31 (maps).

Angelo, R. and D.E. Boufford. 2013a. Atlas of the flora of New England: Fabaceae. Phytoneuron 2013-2: 1-15 + figs. 1–21 (maps).

Angelo, R. and D.E. Boufford. 2013b. Atlas of the flora of New England: Families of vols. 6 & 14: Flora of North America. Phytoneuron 2013-45: 1 23 + figs. 1-30 (maps).

Angelo, R. and D.E. Boufford. 2014. Atlas of the flora of New England: Families of vols. 17 & 18: Flora of North America. Phytoneuron 2014-21: 1 24 + figs. 1-32 (maps).

Consortium of Northeastern Herbaria. 2013 onwards. CNH: Consortium of Northeastern Herbaria. <http neherbarıa org >

Fernald, M.L. 1950. Gray's Manual of Botany (ed. 8). American Book Company, New York.

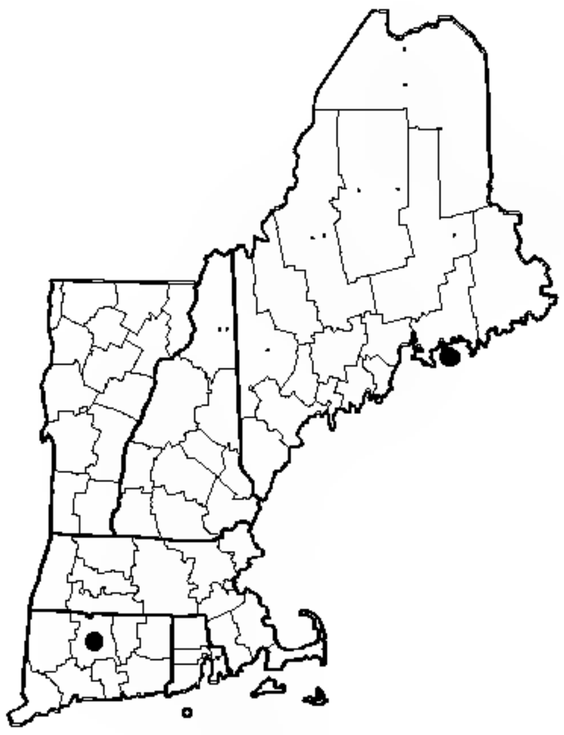
Gleason, H.A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada (ed. 2). The New York Botanical Garden, Bronx, New York.

Goldblatt, P. and D.E. Johnson (eds.). 1979 . Index to Plant Chromosome Numbers (IPCN). Missouri Botanical Garden, St. Louis. <http www tropıcos org/Project/IPCN>.

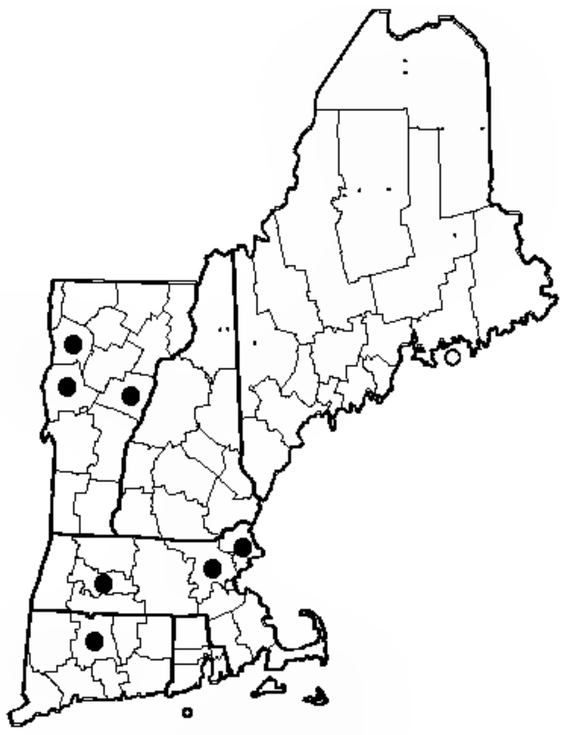
Seymour, F.C. 1982. The Flora of New England, 2nd ed. Phytologia Mem. V. Plainfield, New Jersey.

Stevens, P.F. 2001 onwards. Angiosperm Phylogeny Website, version 9, June 2008 [and more or less continuously updated since]. <http www mobot org/MOBOT research APweb>

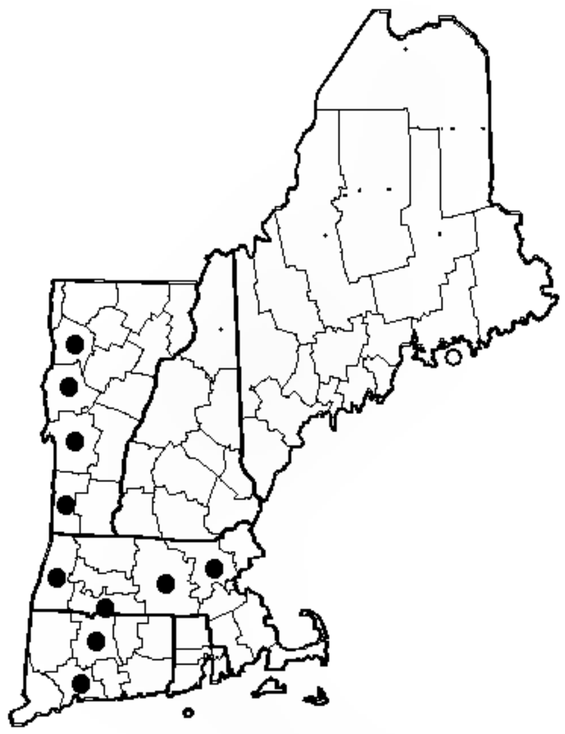
Figure 1 Key map for counties of the New England states (and Mt Desert Island, Maine, Block Island, Rhode Island, arbitrary divisions of larger Maine counties and of Coos County, New Hampshire)



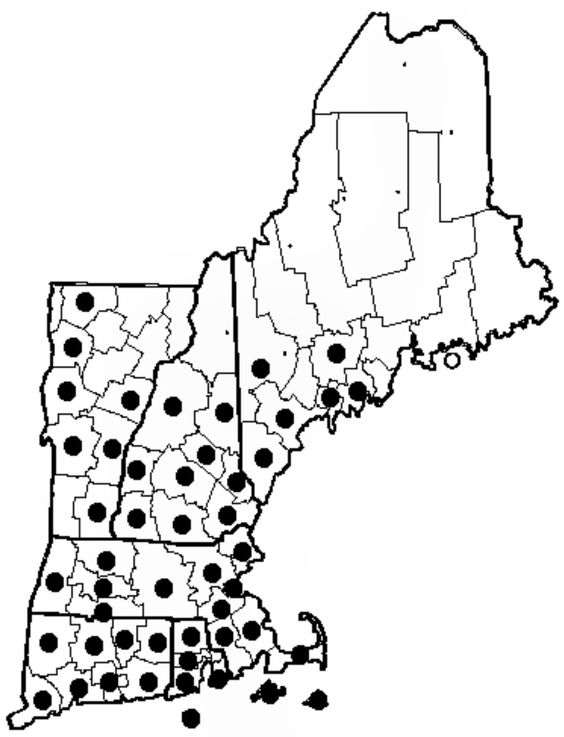
ACTINIDIA ARGUTA



COTINUS COGGYGRIA



Rhus aromatica
var *aromatica*



Rhus copallinum
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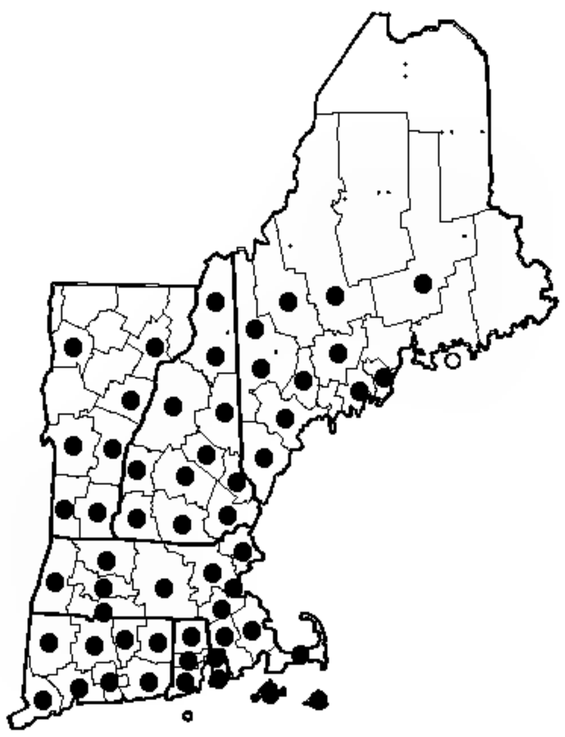
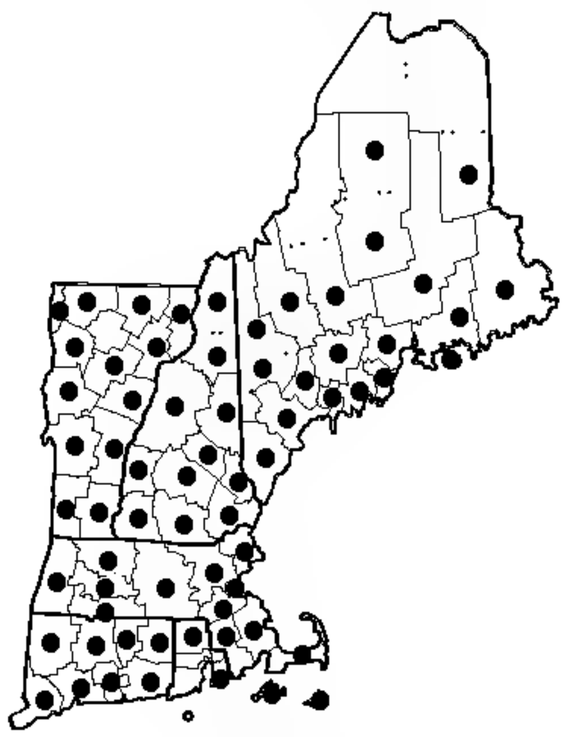
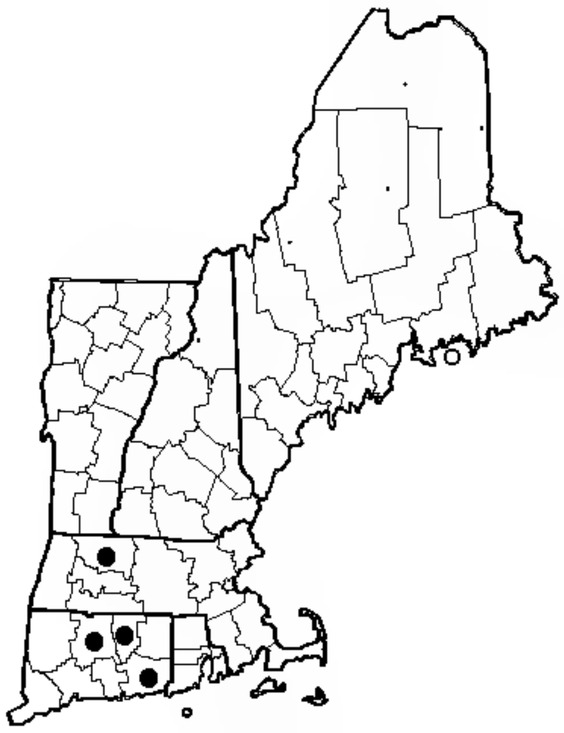


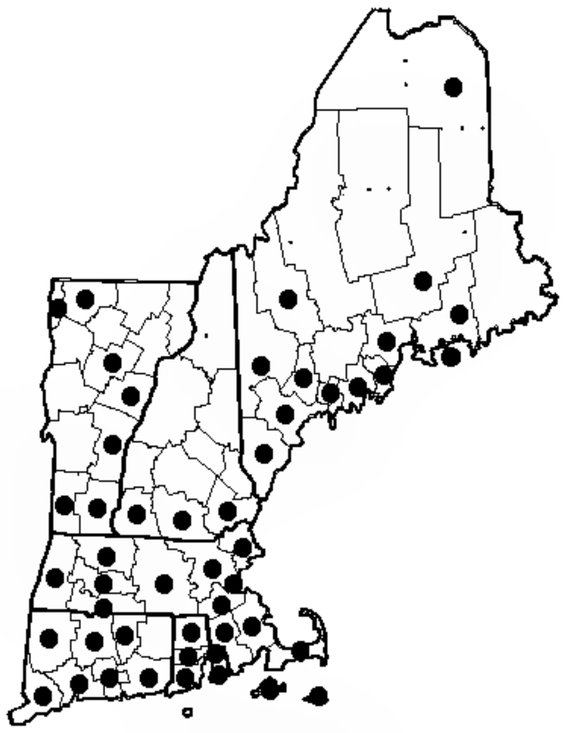
Rhus glabra



Rhus typhina



Rhus X *pulvinata*



Toxicodendron radicans
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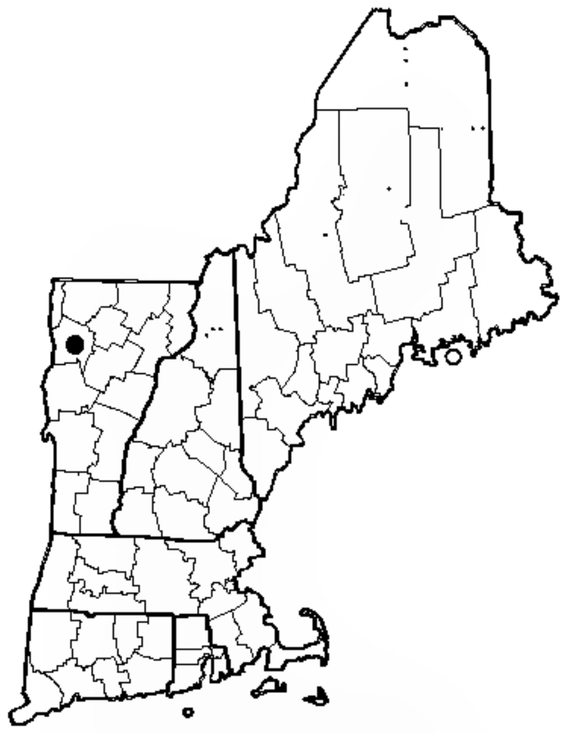

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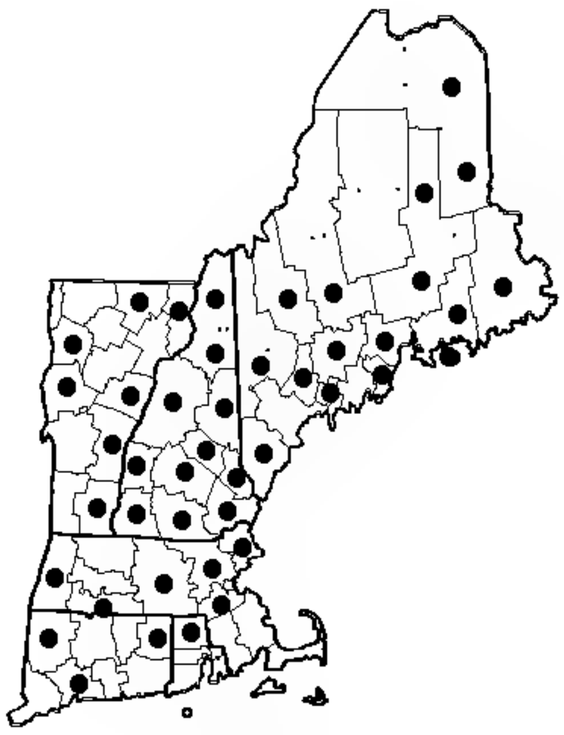
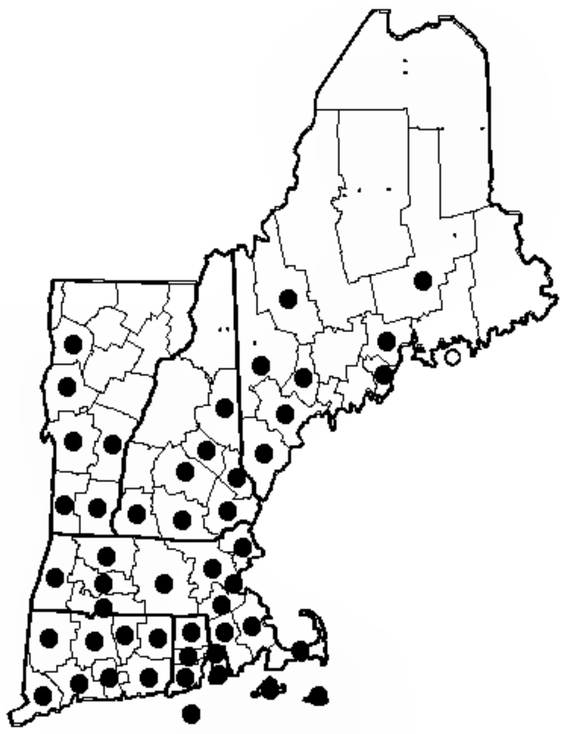
Figure 2 Distribution maps



Toxicodendron rydbergii



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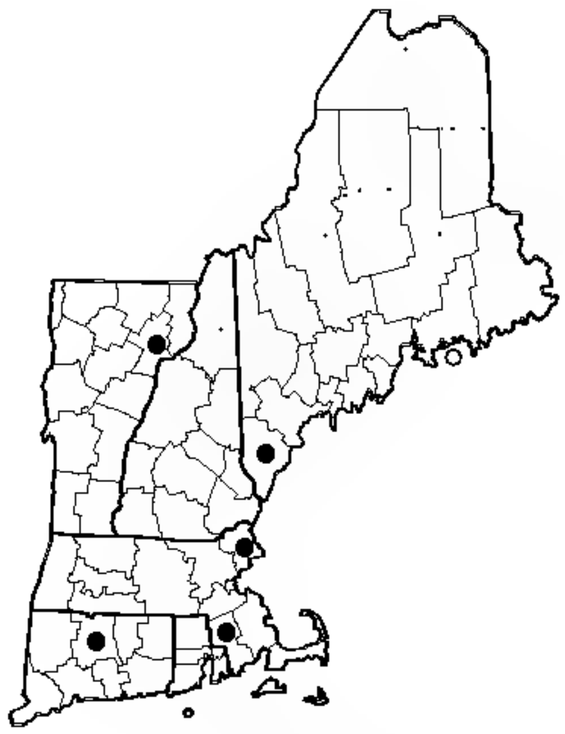
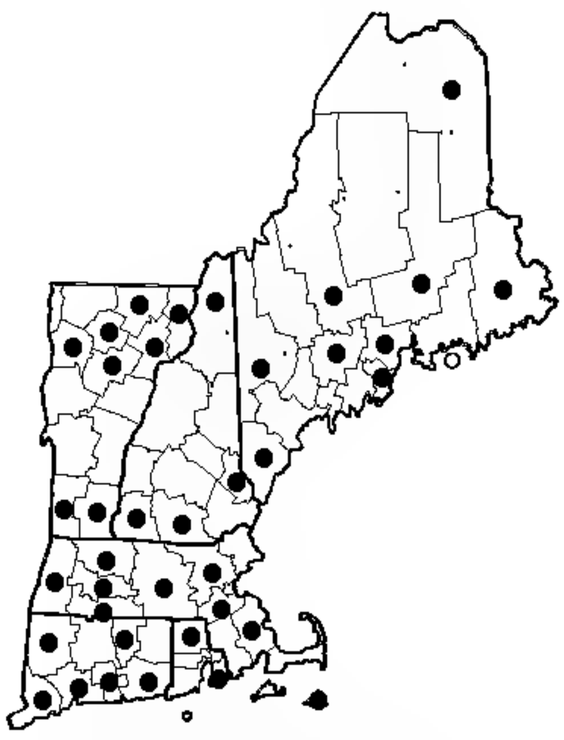
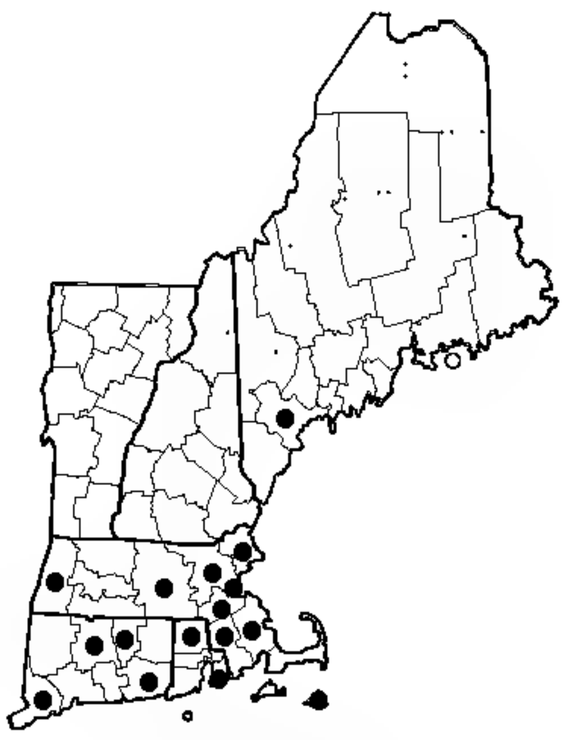


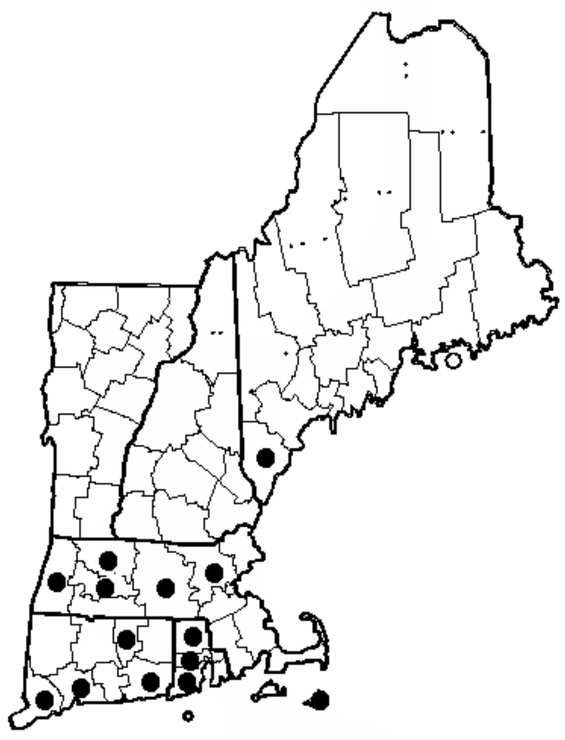
Toxicodendron radicans
X T rydbergii



AEGOPODIUM PODAGRARIA



AETHUSA CYNAPIUM



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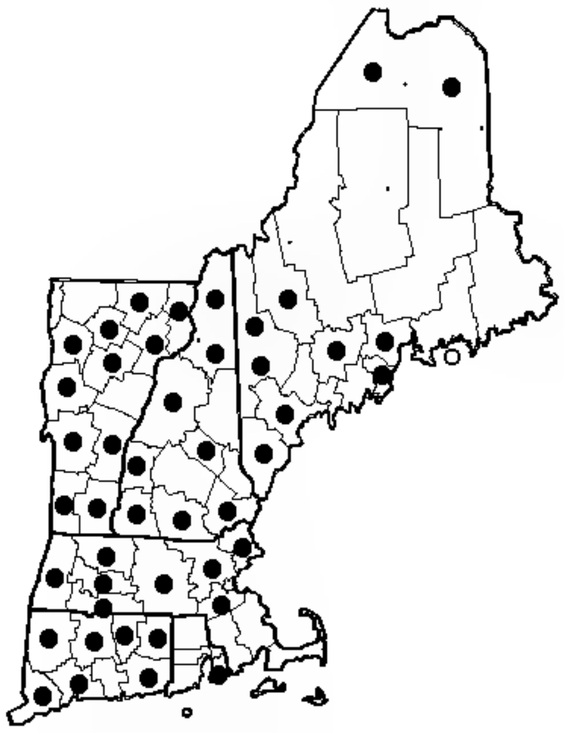

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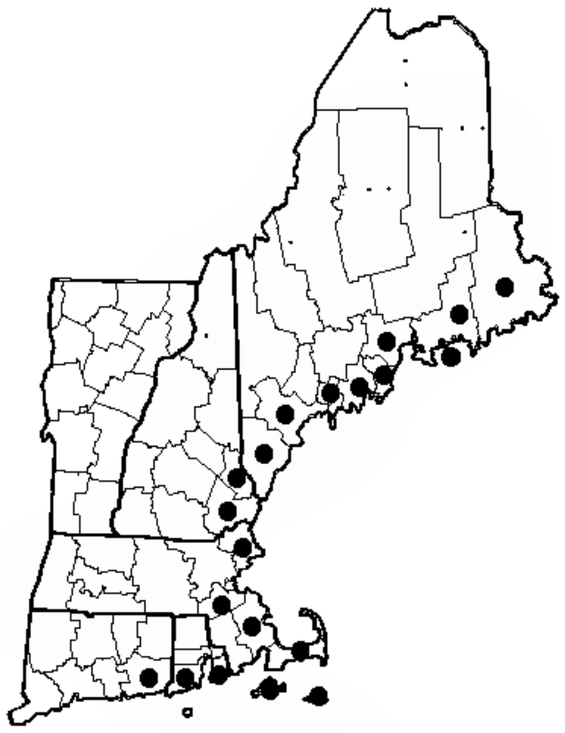

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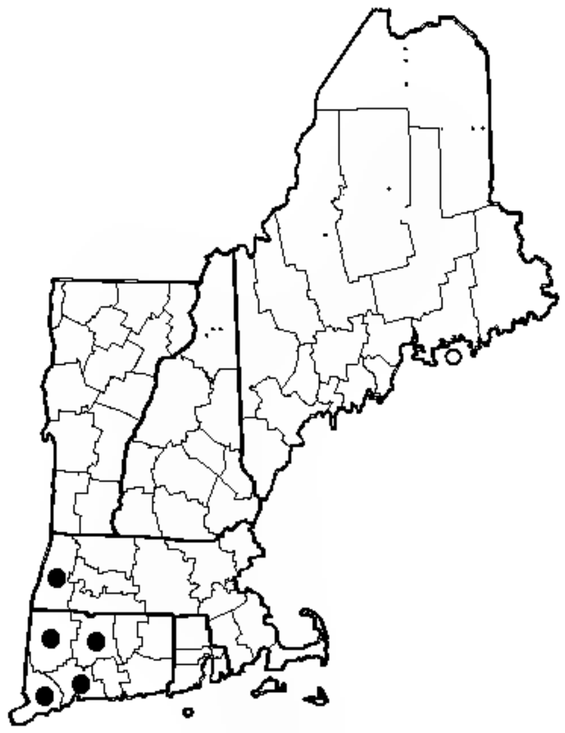

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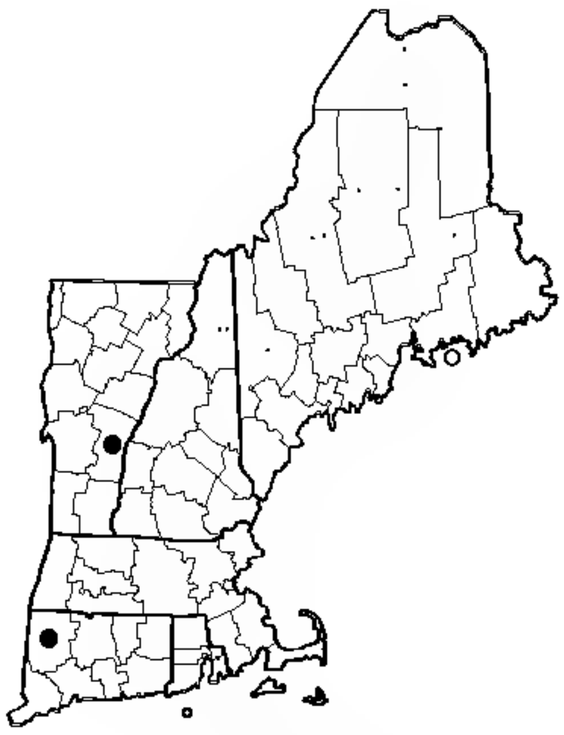
Figure 3 Distribution maps



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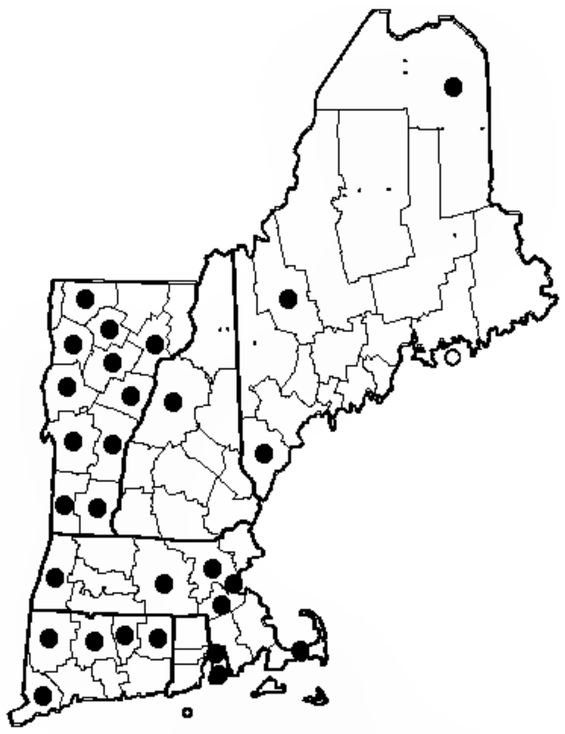

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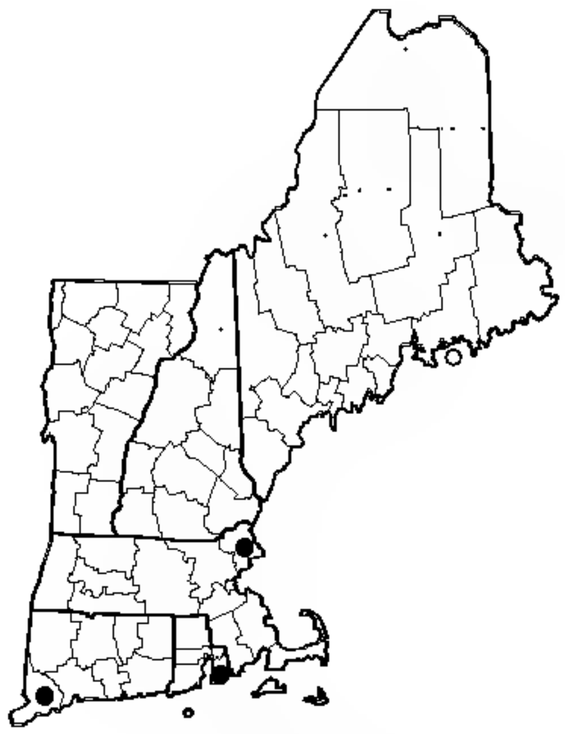
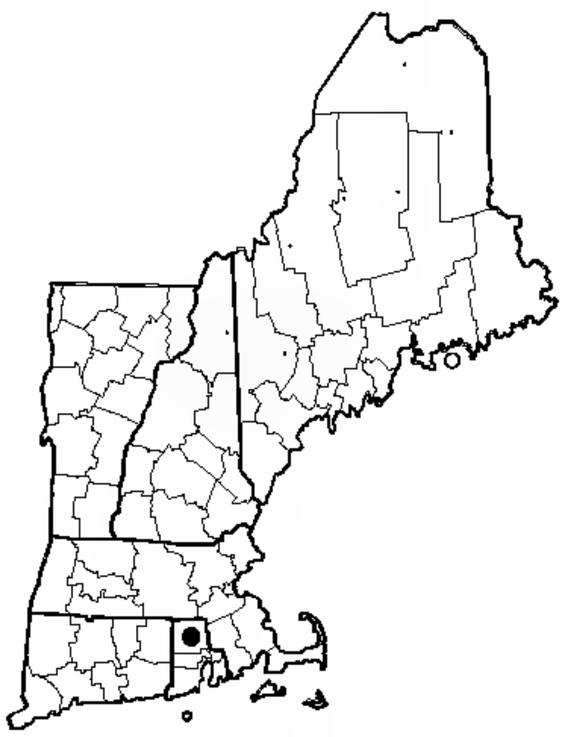


APIUM GRAVEOLENS
var *DULCE*



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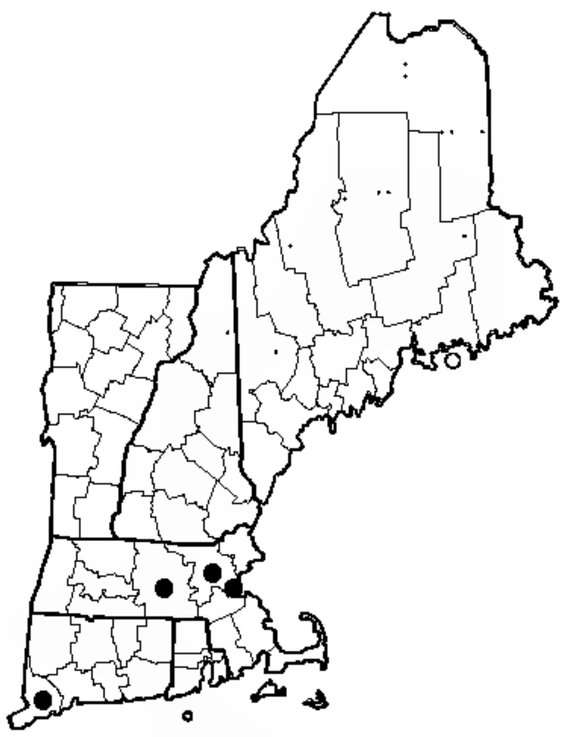

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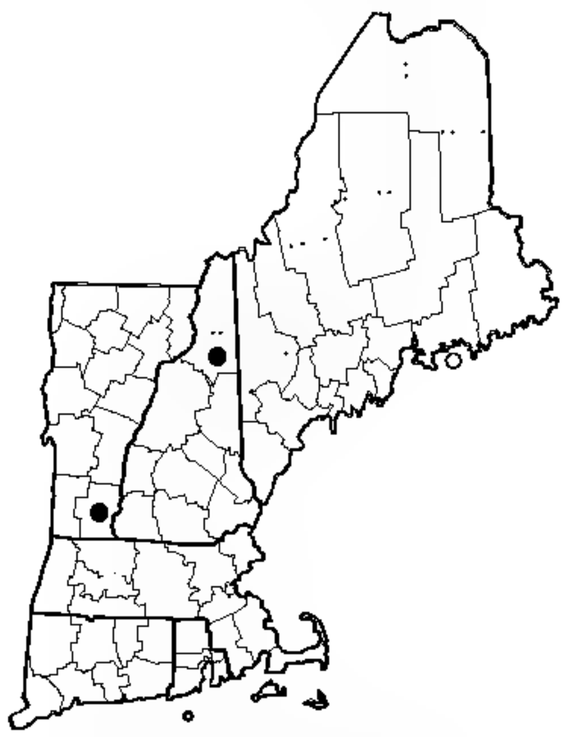

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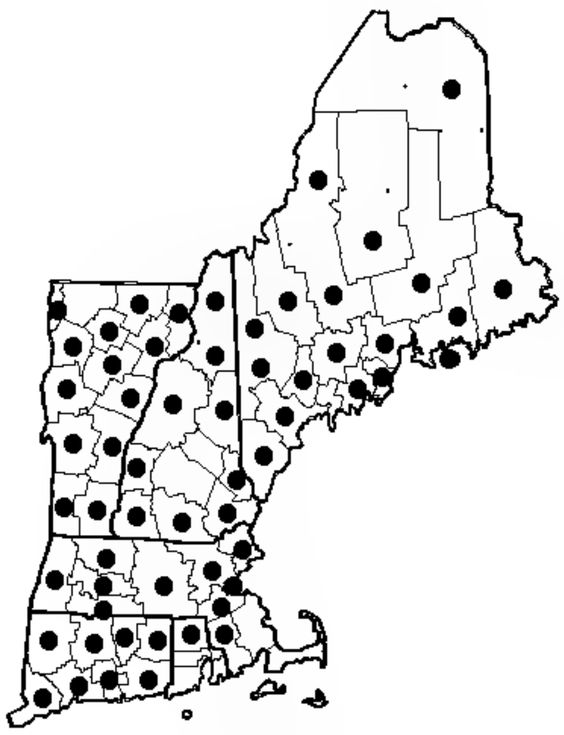

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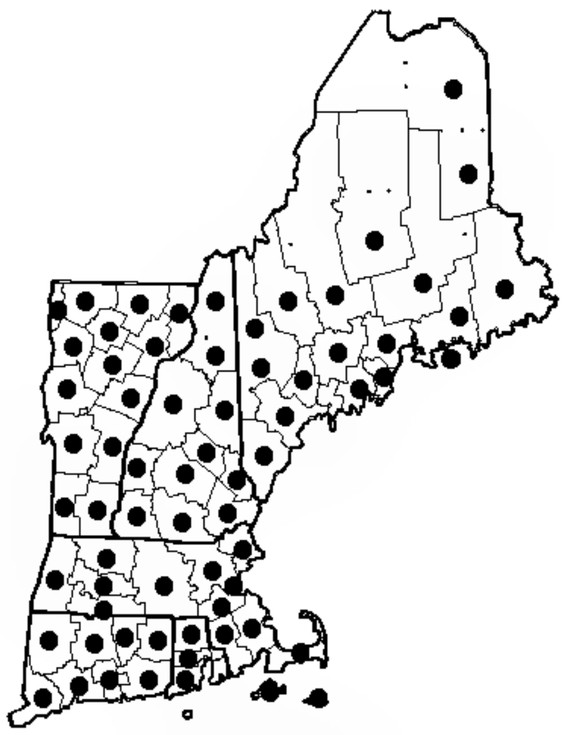

Cicuta bulbifera

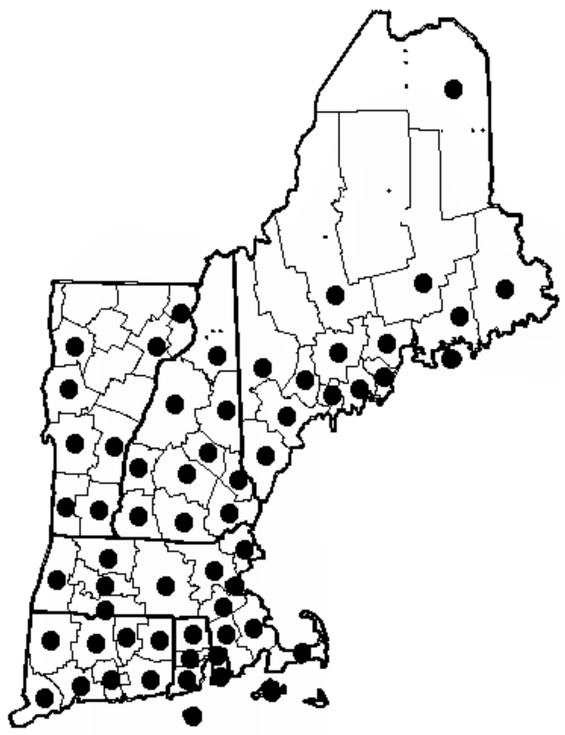

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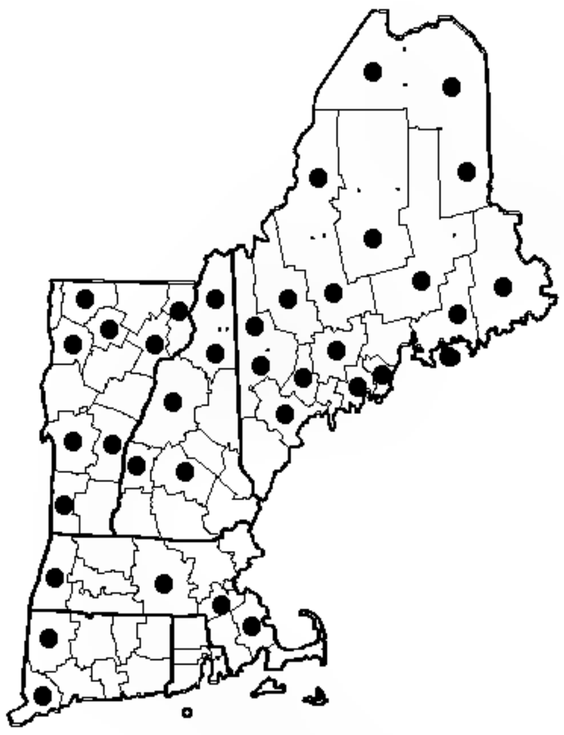
Figure 4 Distribution maps



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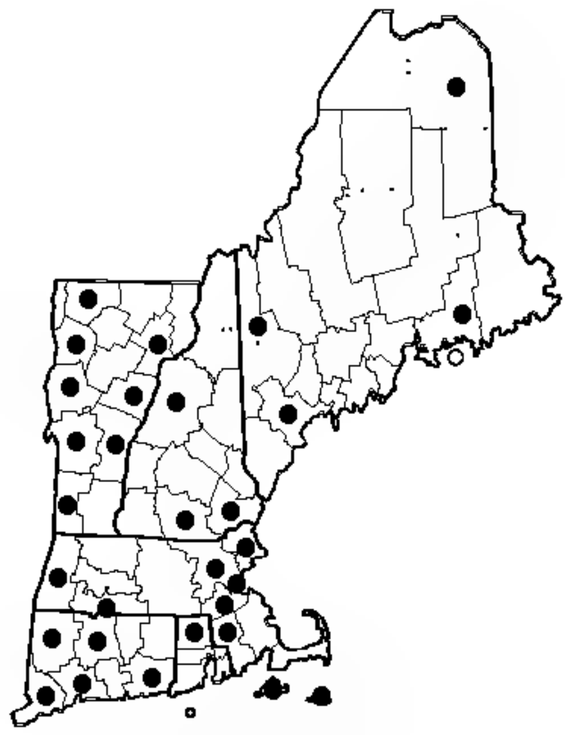
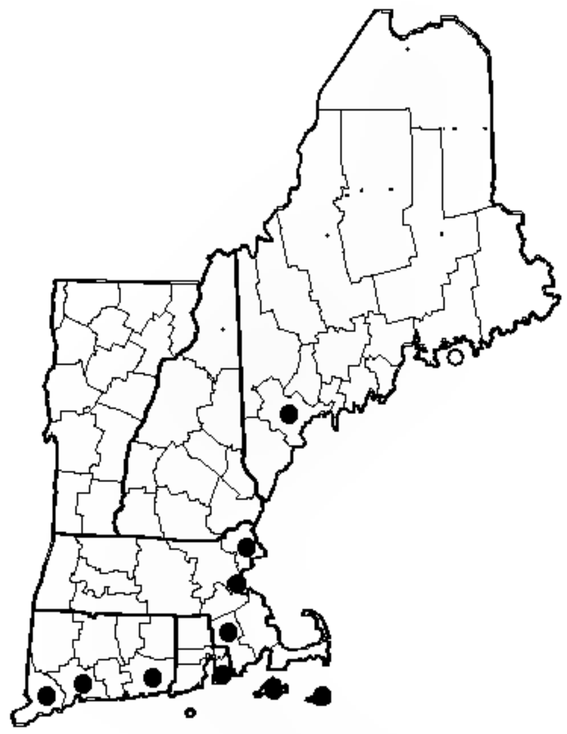
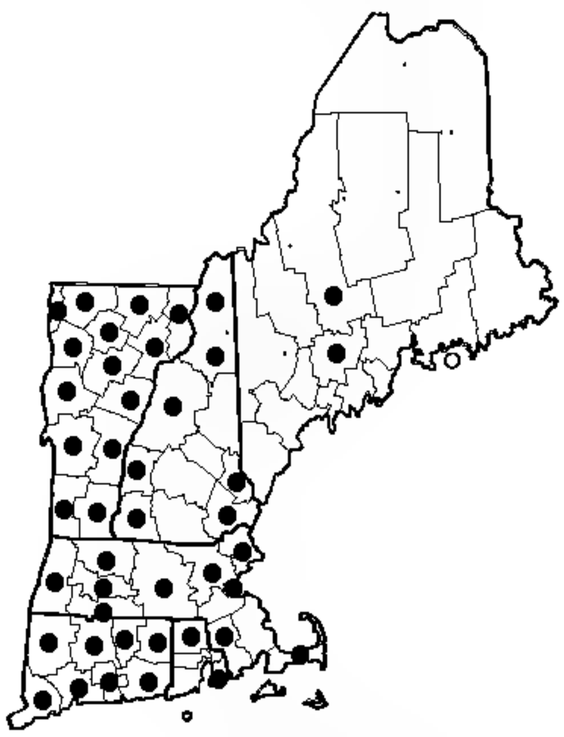


CONIUM MACULATUM



CORIANDRUM SATIVUM



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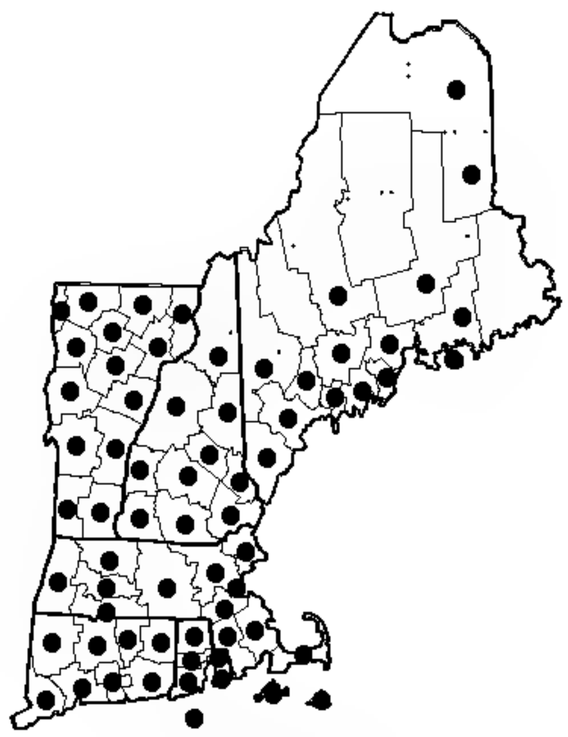

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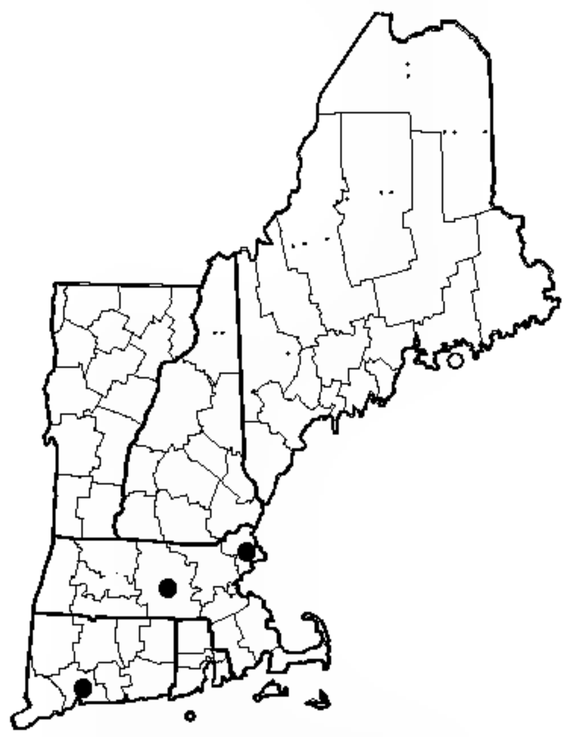

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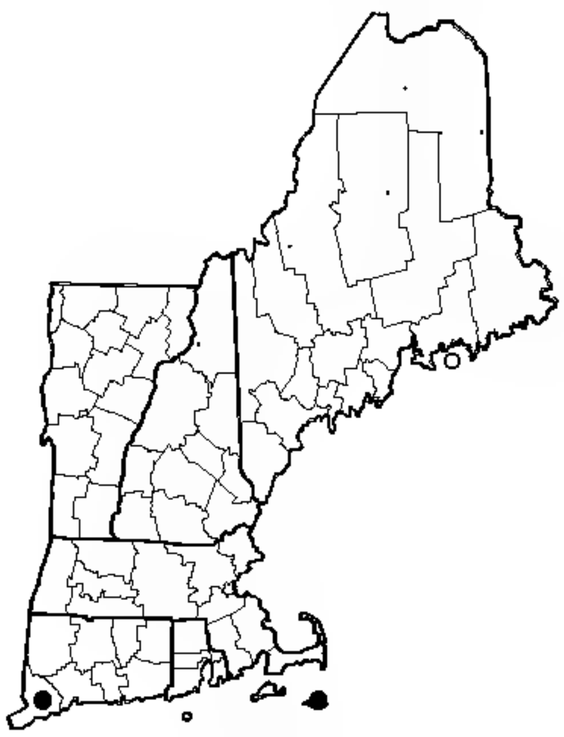

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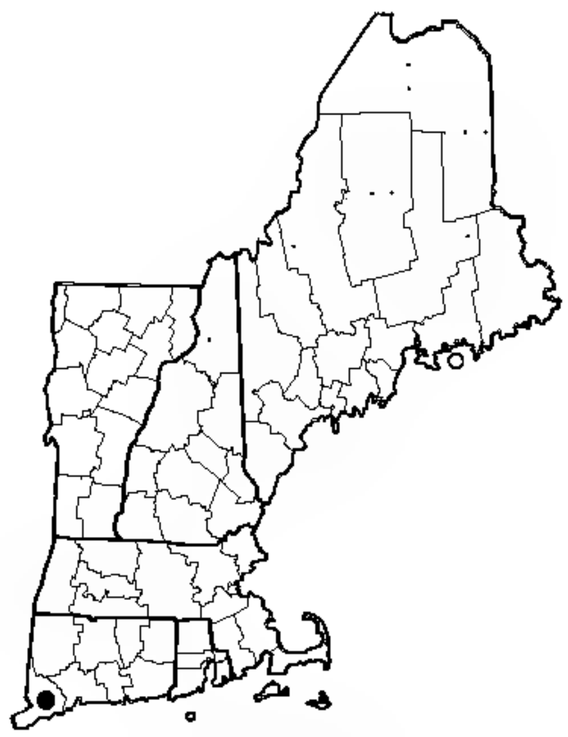
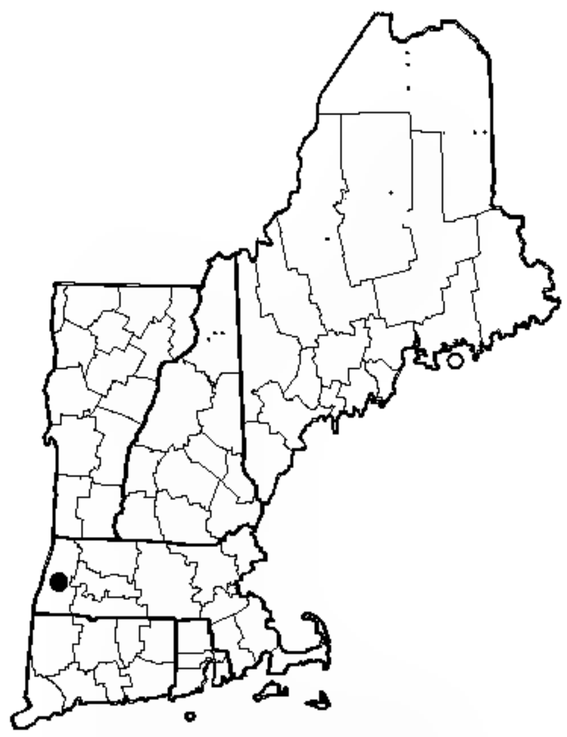
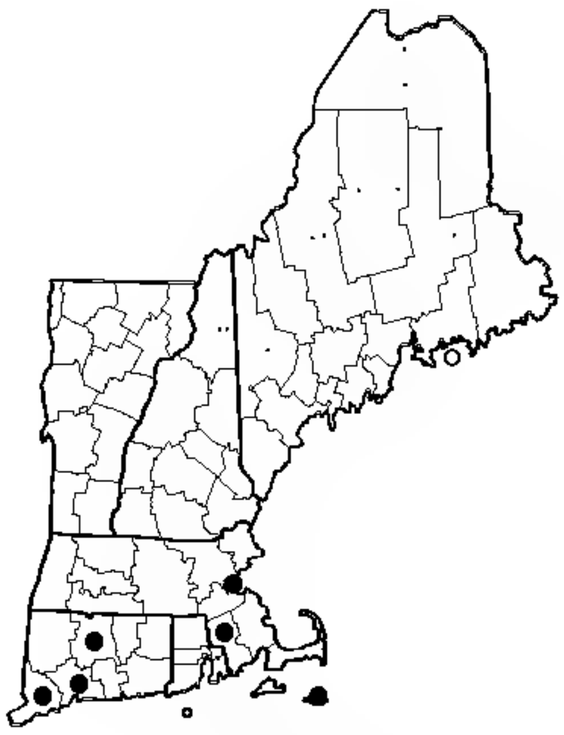


ERYNGIUM YUCCIFOLIUM
var *YUCCIFOLIUM*

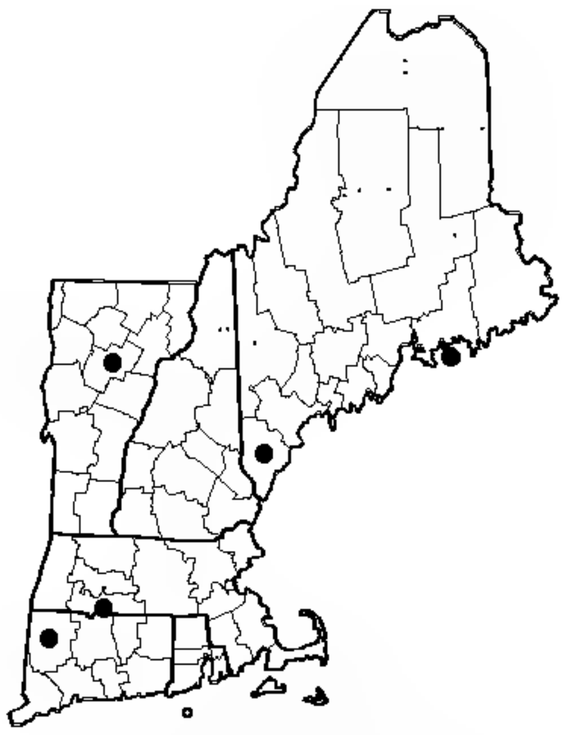


FAICARIA VUIGARIS

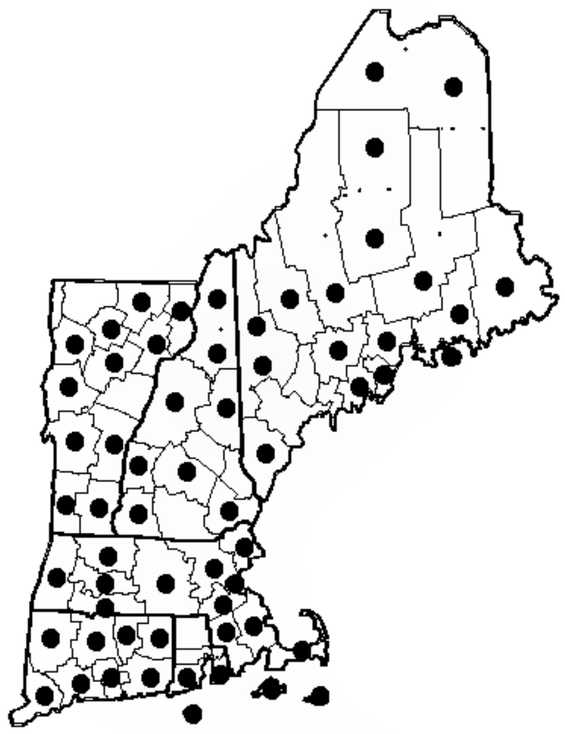
Figure 5 Distribution maps



FOENICULUM VULGARE



HERACLEUM MANTEGAZZIANUM



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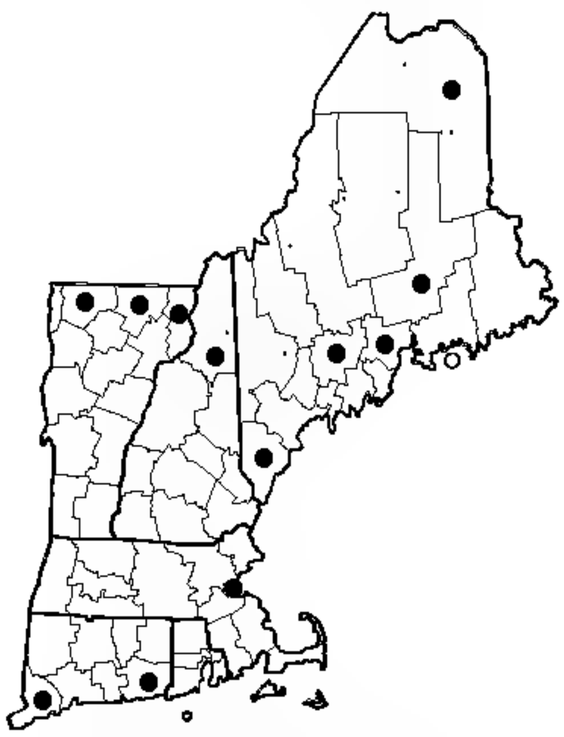
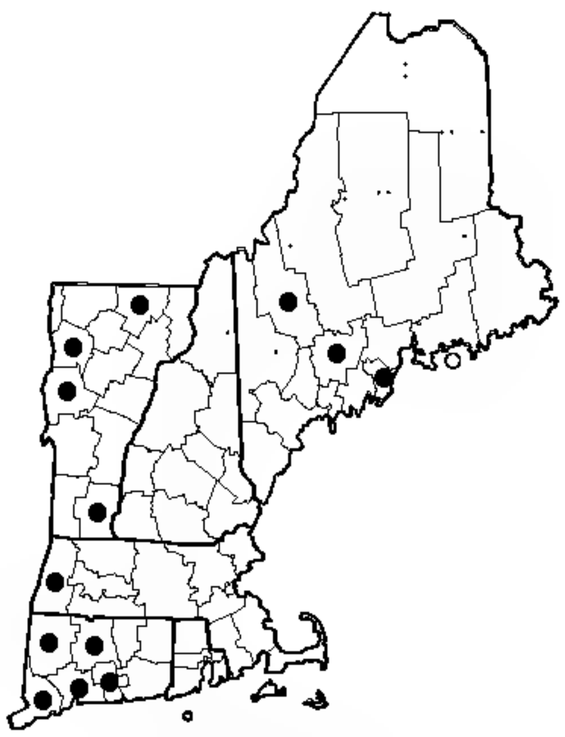
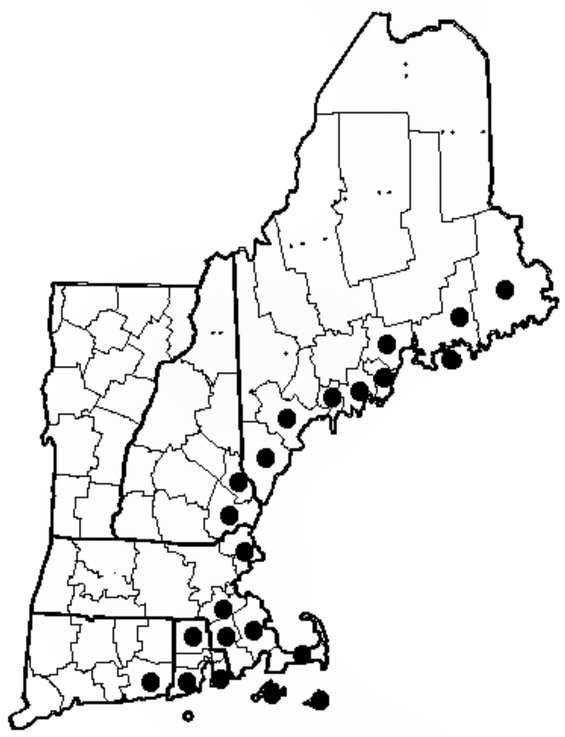
subsp. *montanum*



HERACLEUM SPHONDYLIUM
subsp. *sibiricum*



LEVISTICUM OFFICINALE



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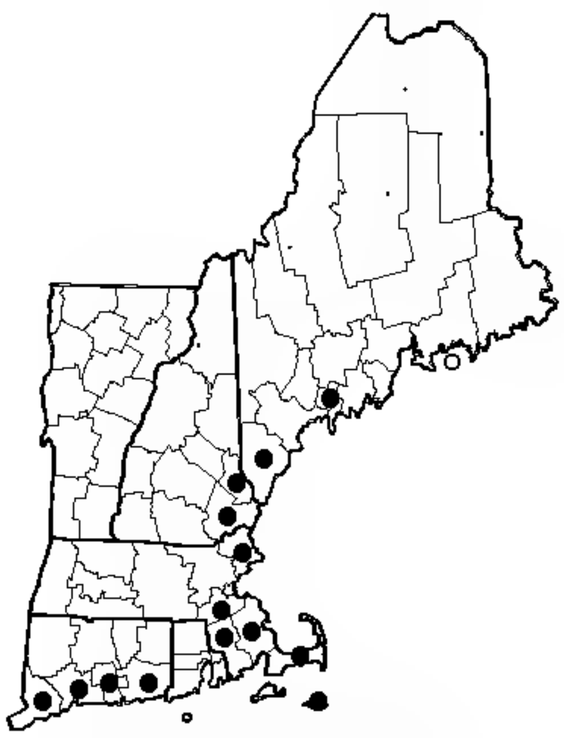
subsp. *scoticum*



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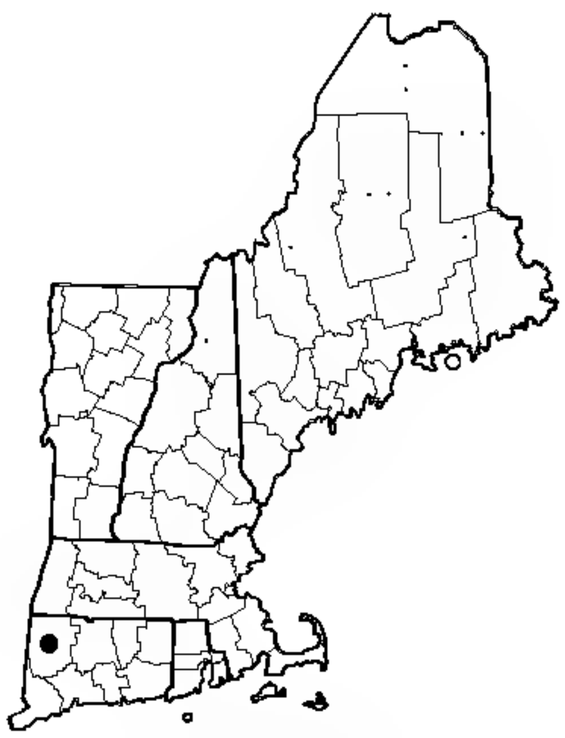
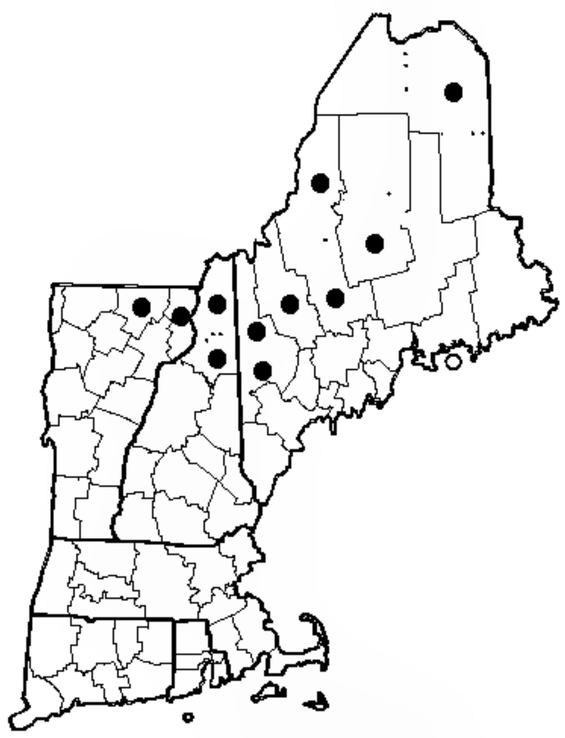
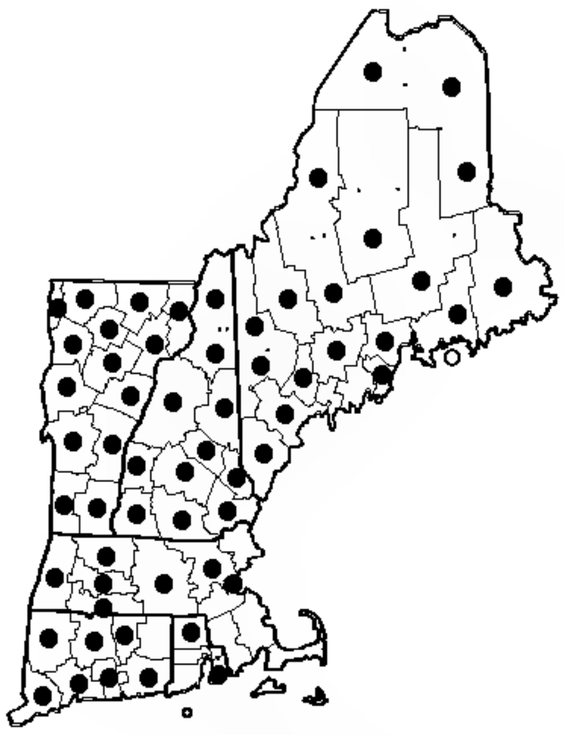


MYRRHIS ODORATA

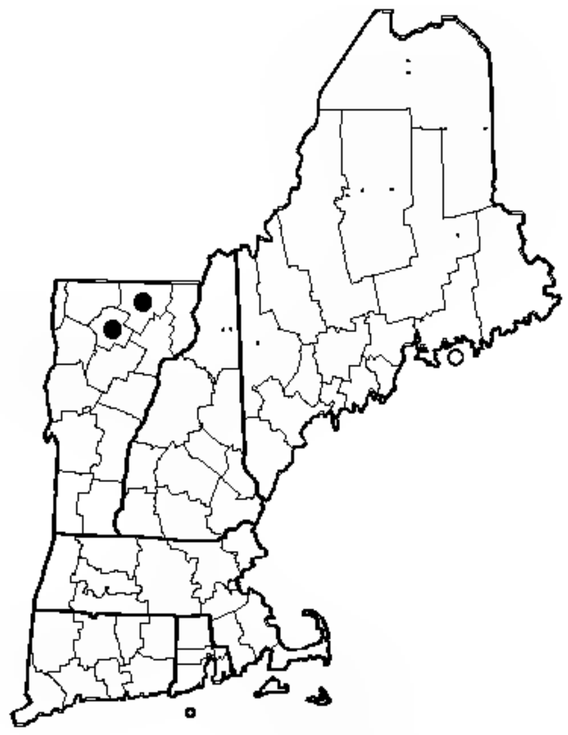


Osmorhiza berteroi

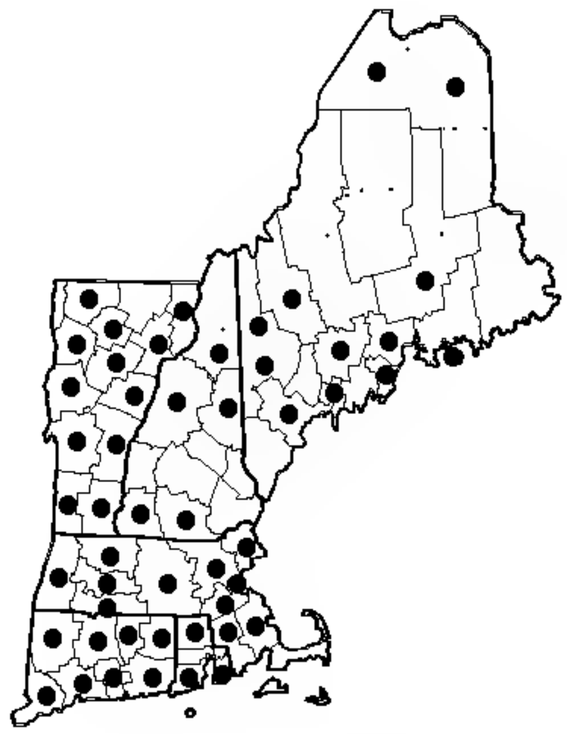
Figure 6 Distribution maps



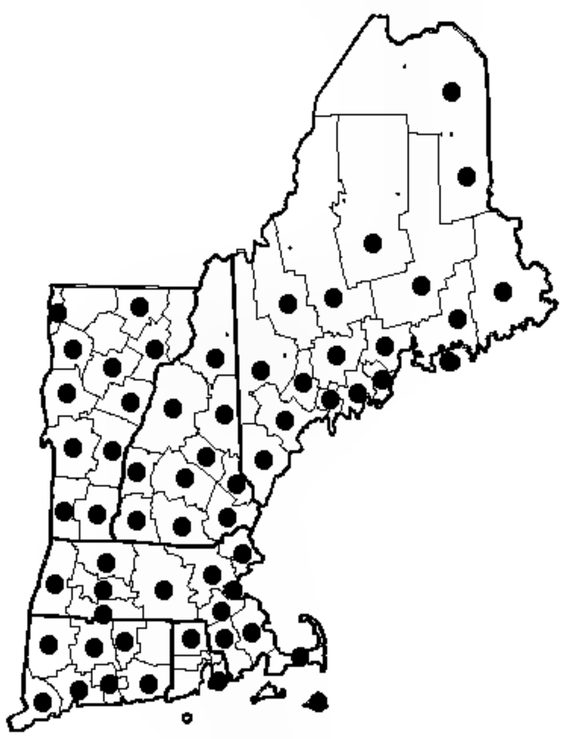
Osmorhiza claytonii



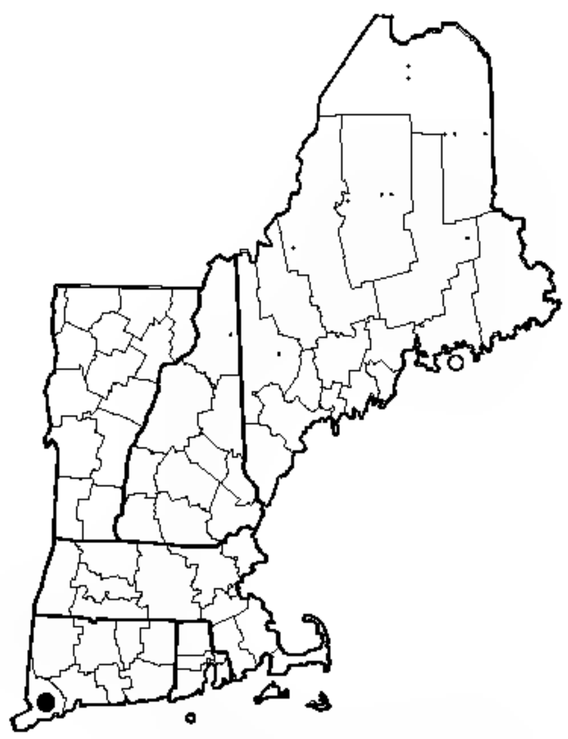
Osmorhiza depauperata



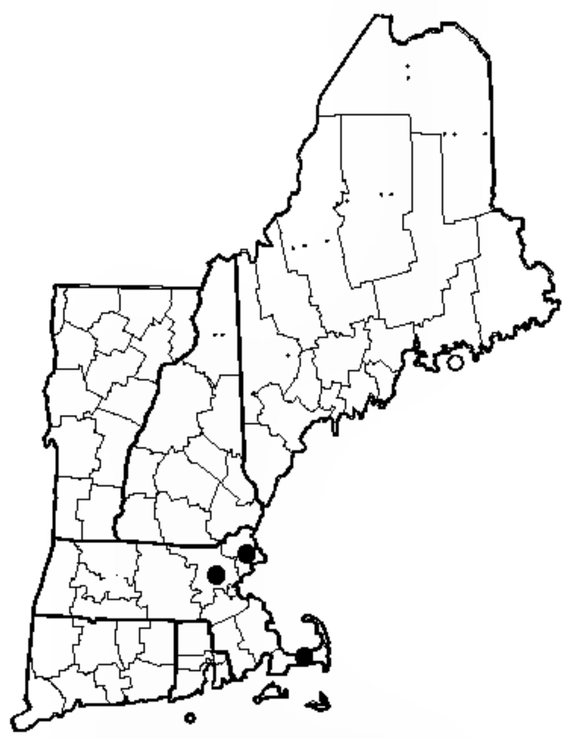
Osmorhiza longistylis



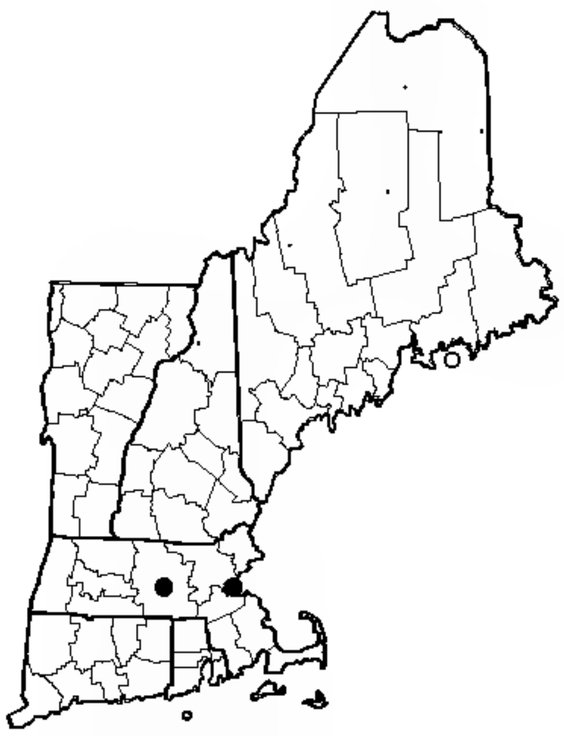
PASTINCA SATIVA



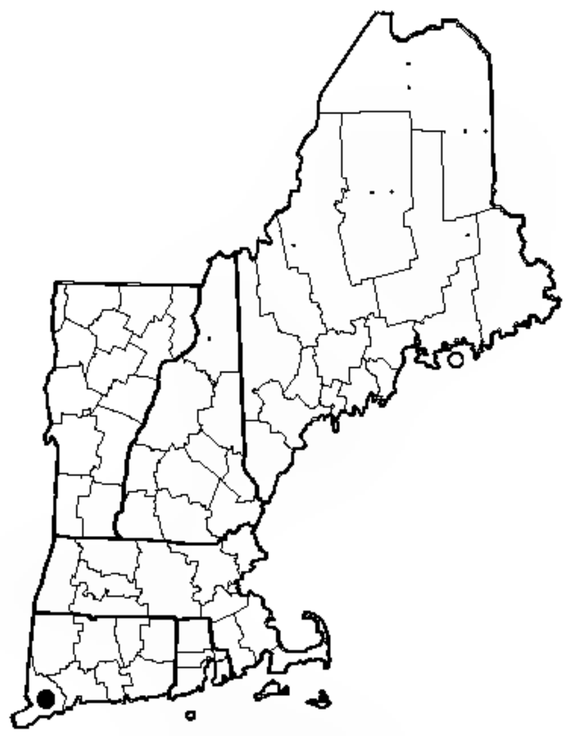
PETROSELINUM CRISPUM



PEUCEDANUM PALUSTRE



PIMPINELLA ANISUM



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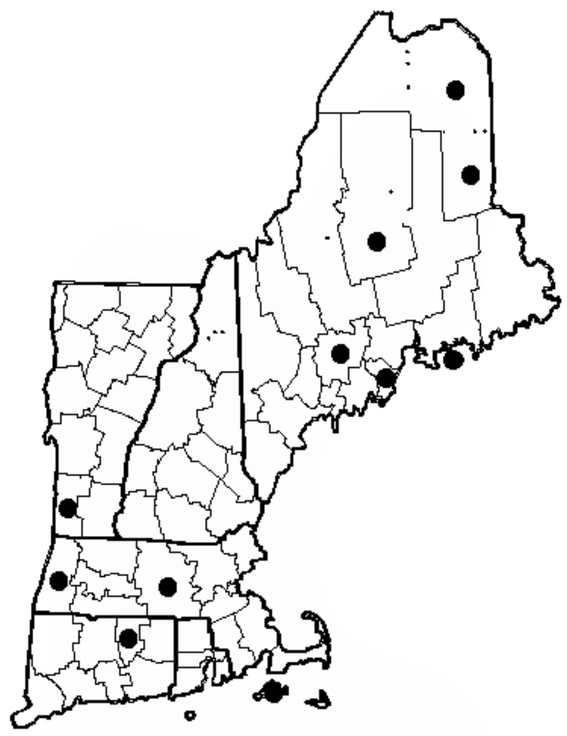
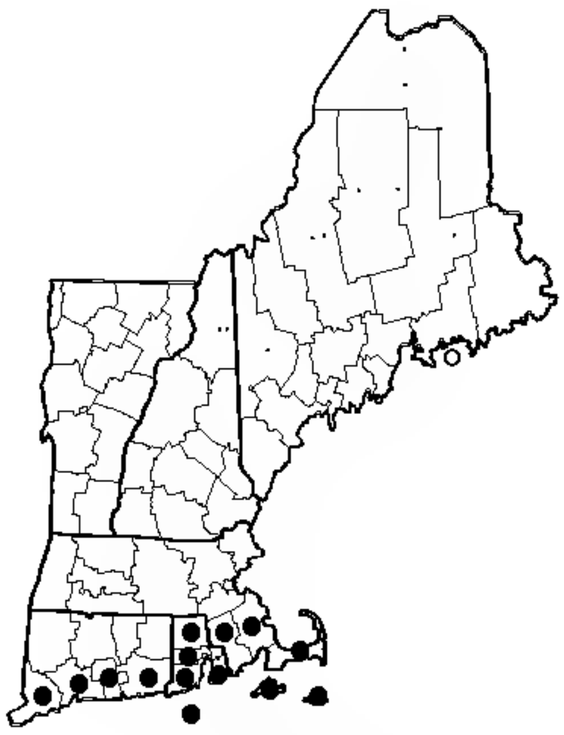
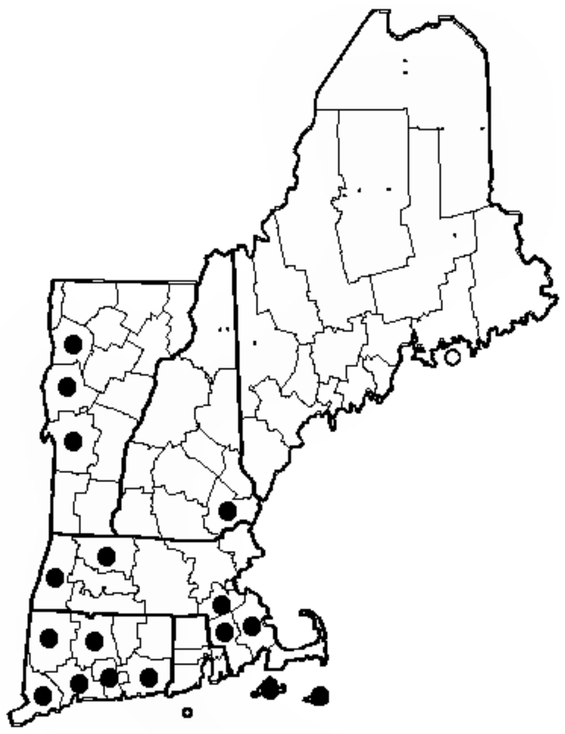


PIMPINELLA SAXIFRAGA
subsp. *SAXIFRAGA*

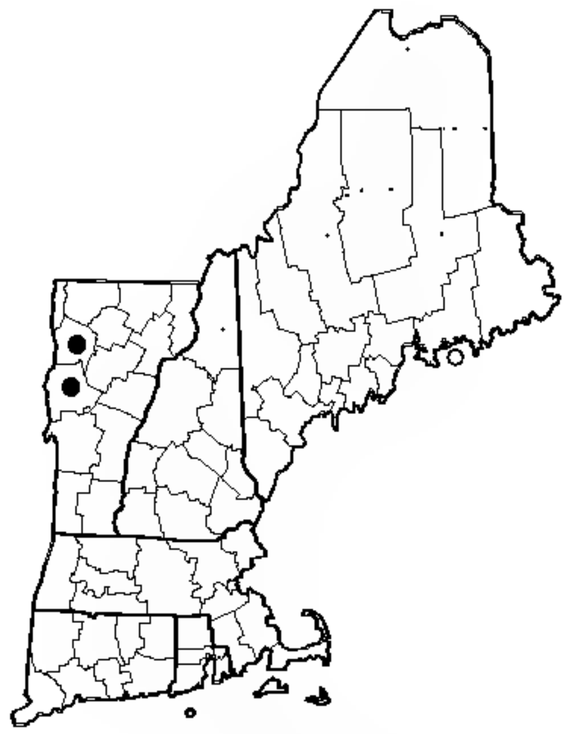
Figure 7 Distribution maps



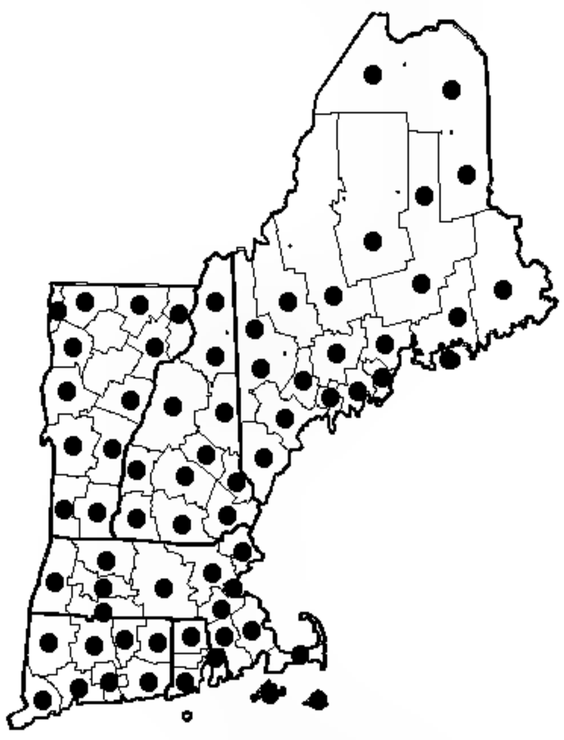
Ptilimnium capillaceum



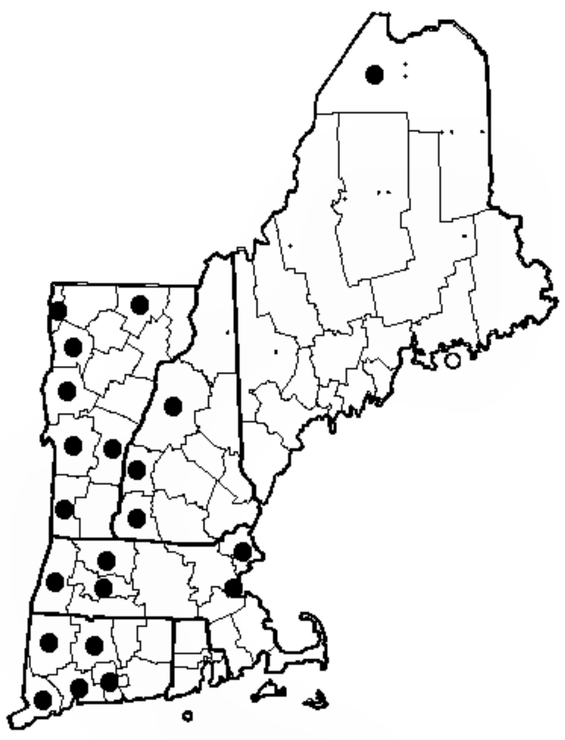
Sanicula canadensis
var *canadensis*



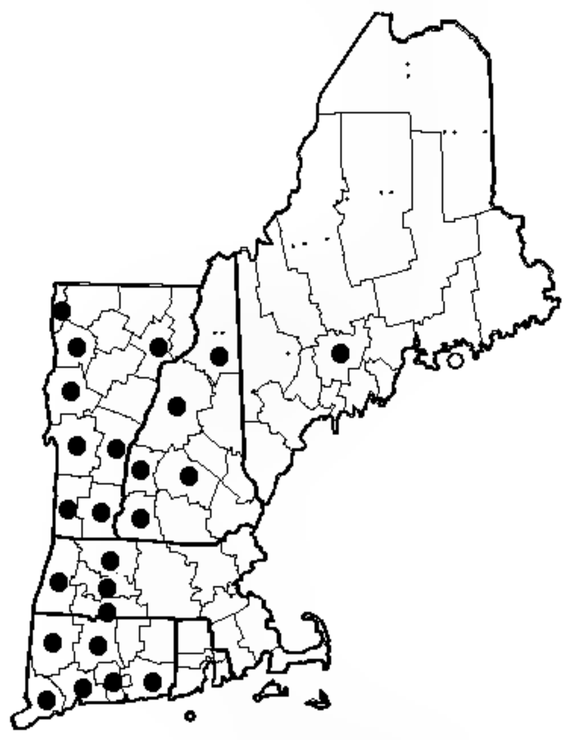
Sanicula canadensis
var *grandis*



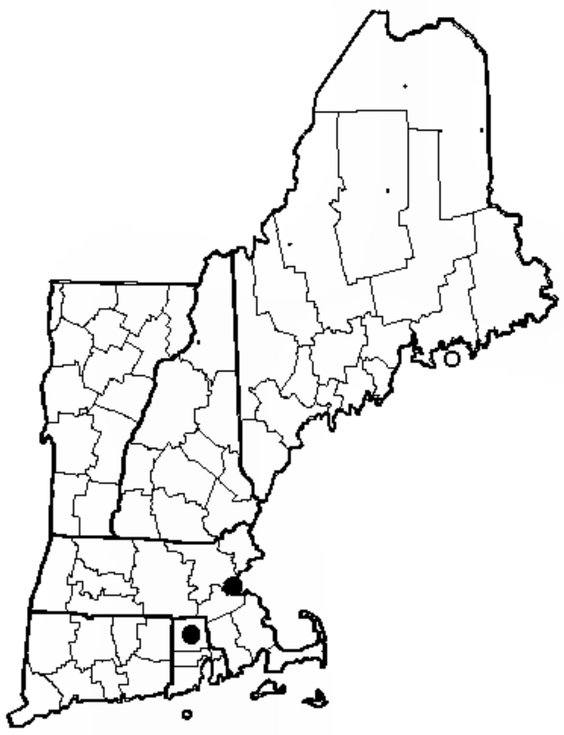
Sanicula marilandica



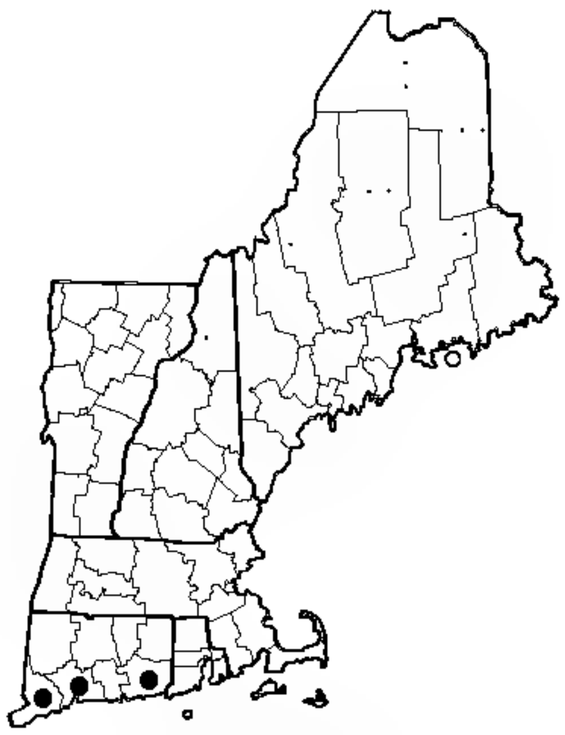
Sanicula odorata



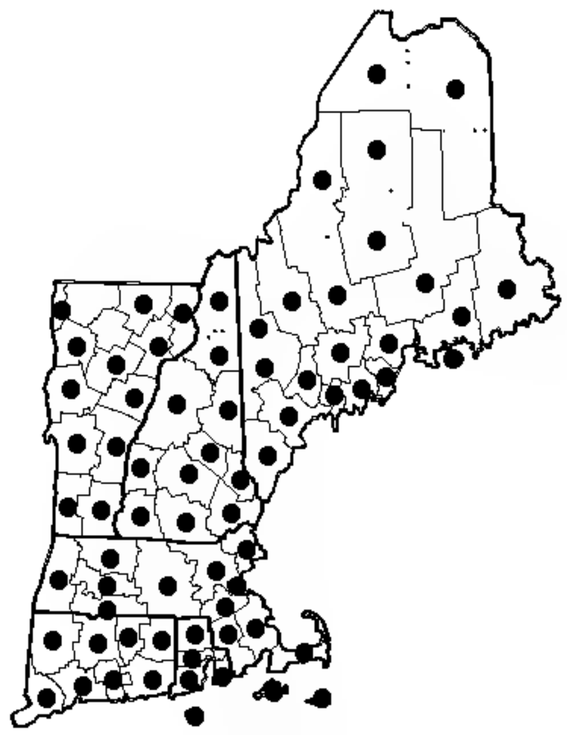
Sanicula trifoliata



SCANDIX PECTEN-VENERIS

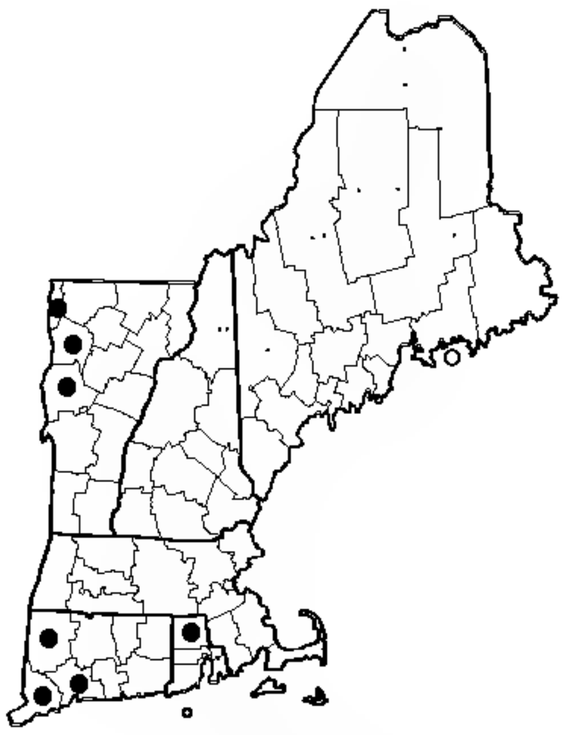


Sium carsonii

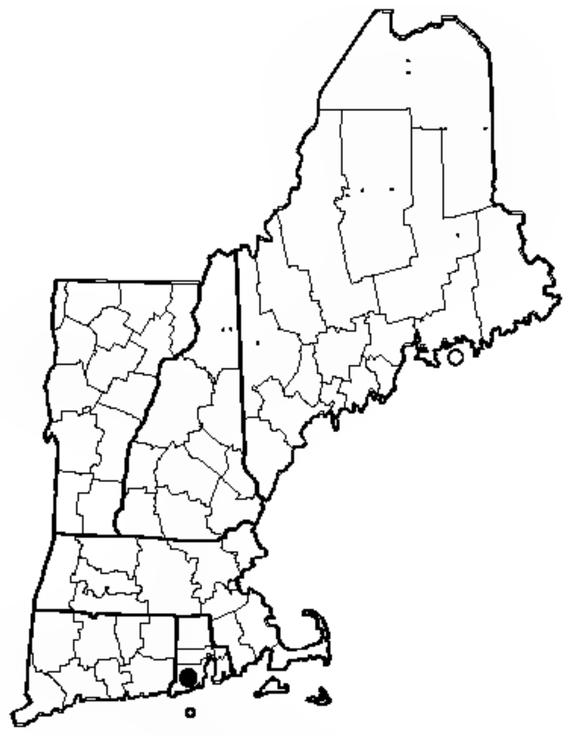


Sium suave

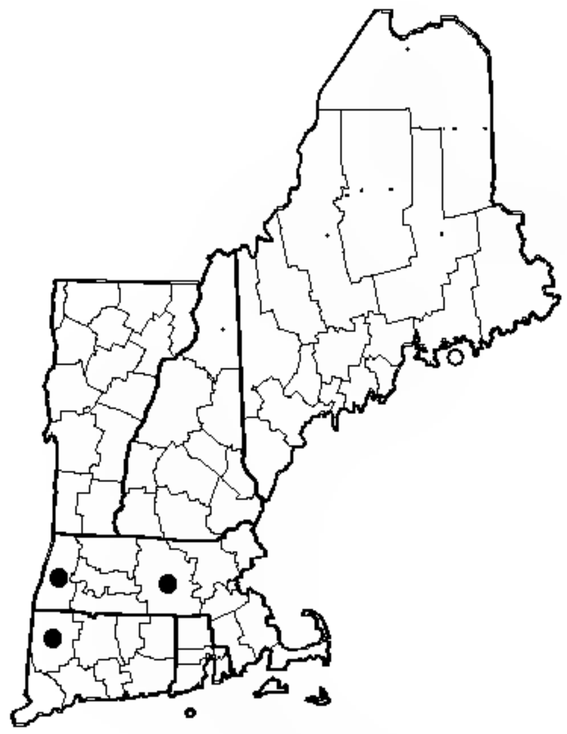
Figure 8 Distribution maps



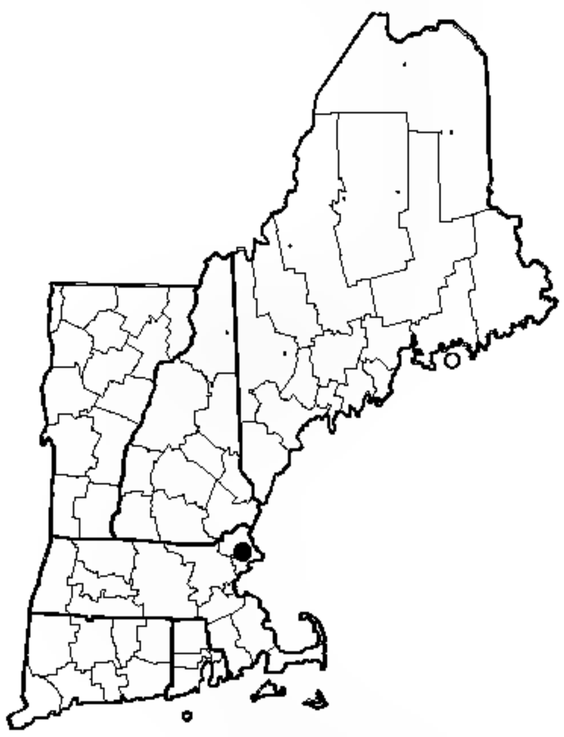
Taenidia integerrima



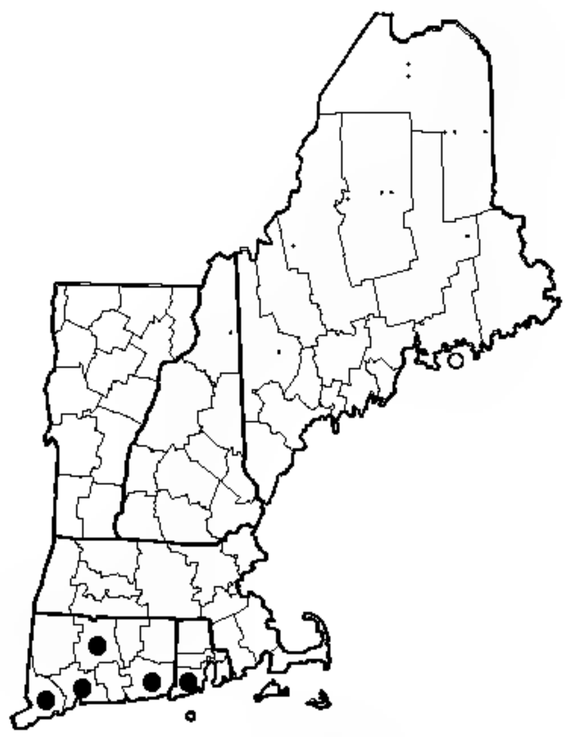
Thaspium trifoliatum
var *trifoliatum*



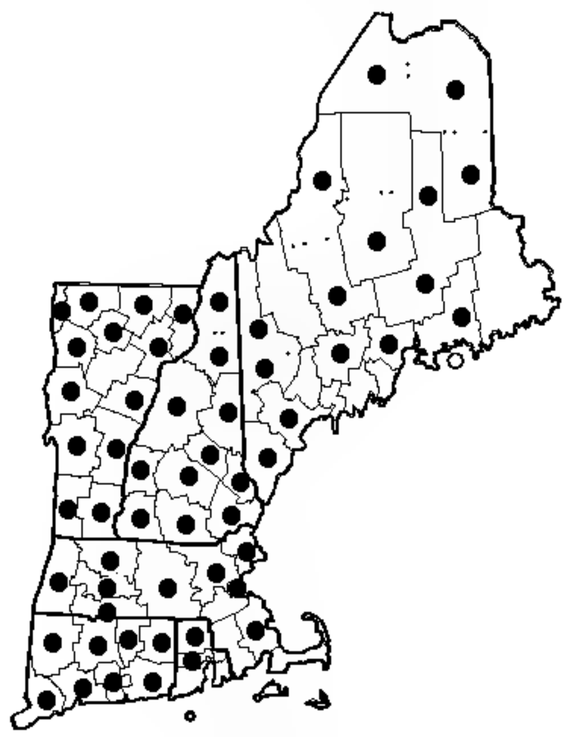
TORILIS JAPONICA



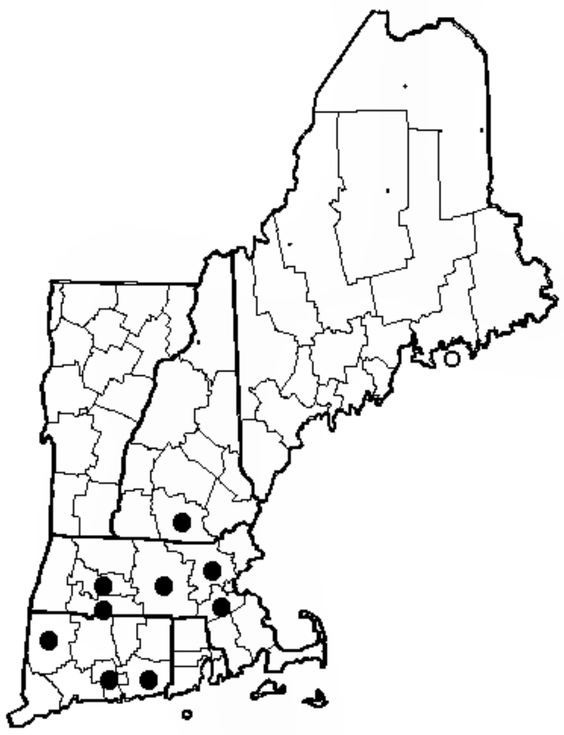
TORILIS LEPTOPHYLLA



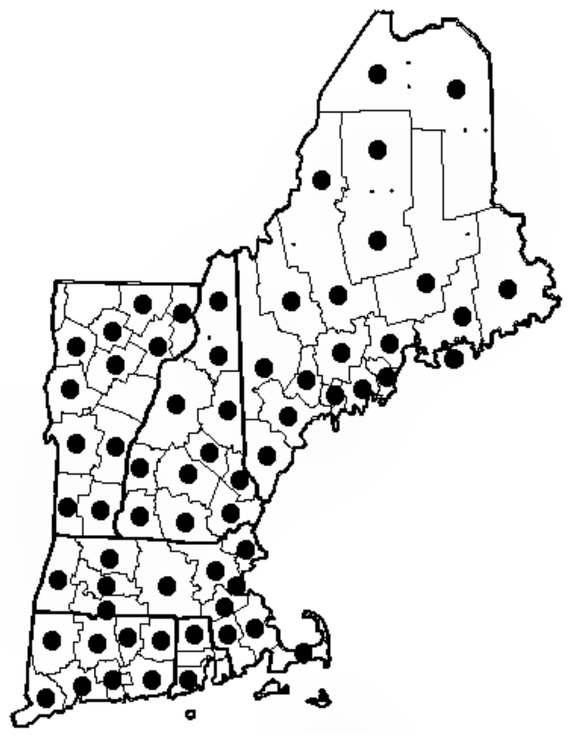
Zizia aptera



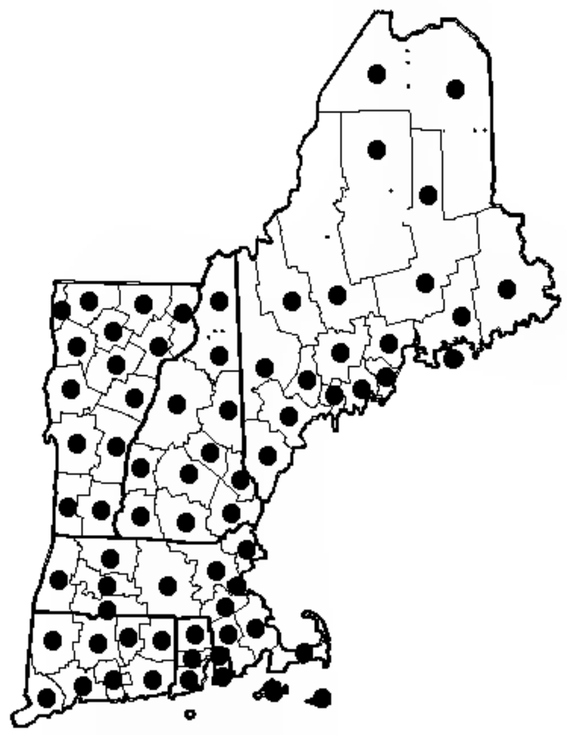
Zizia aurea



ARALIA ELATA

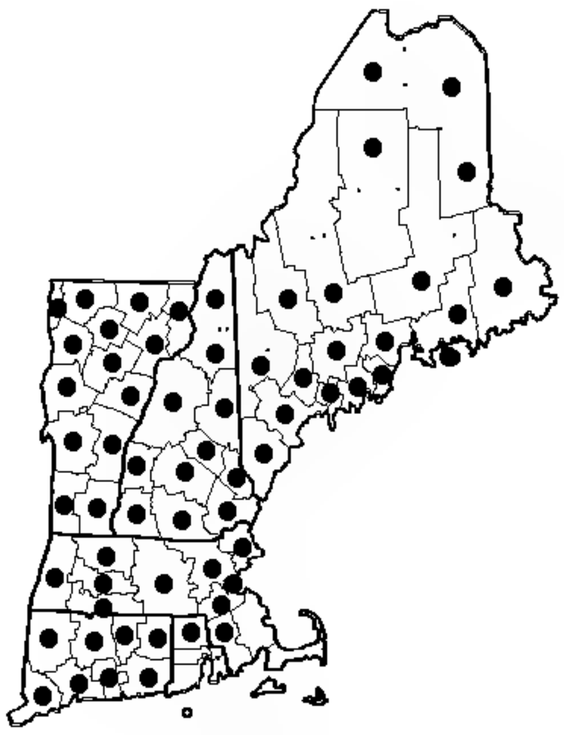


Aralia hispida

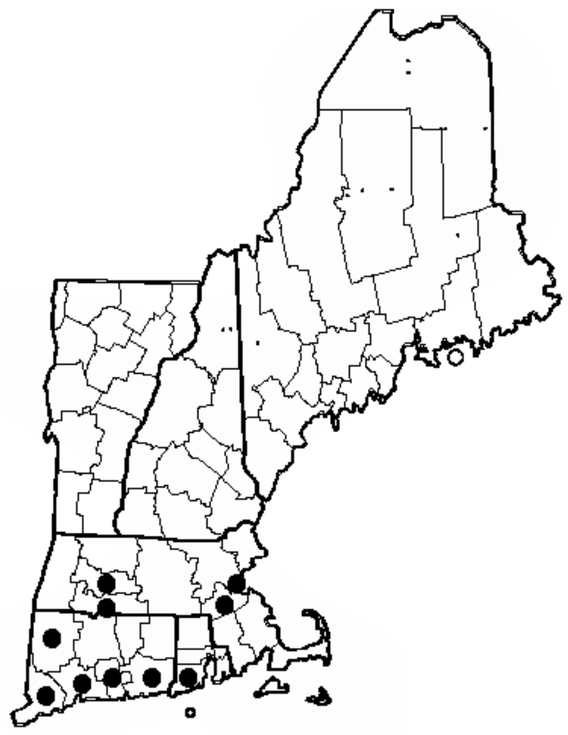


Aralia nudicaulis

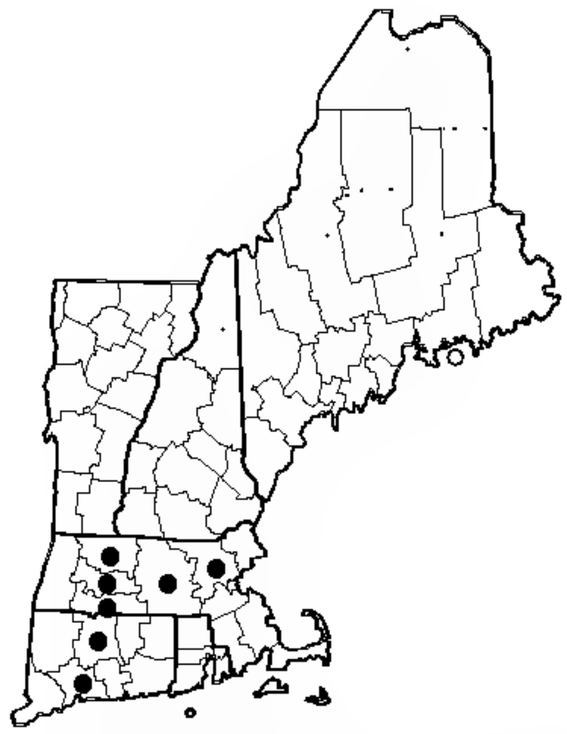
Figure 9 Distribution maps



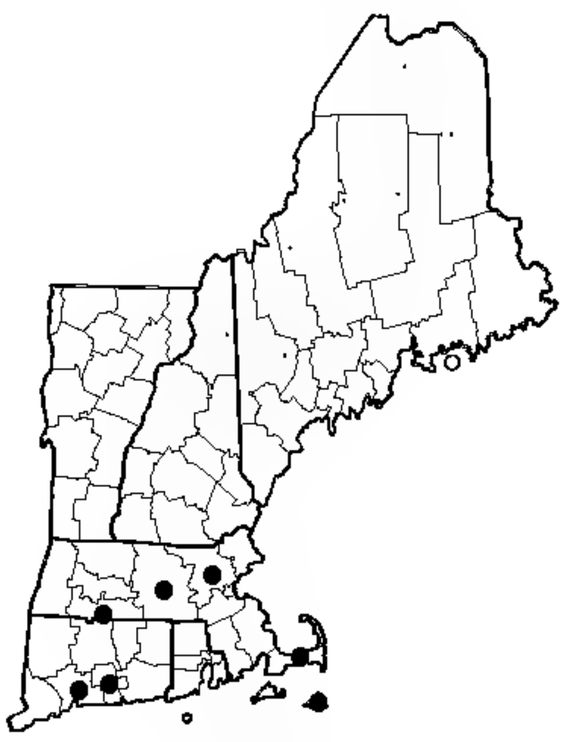
Aralia racemosa
subsp. *racemosa*



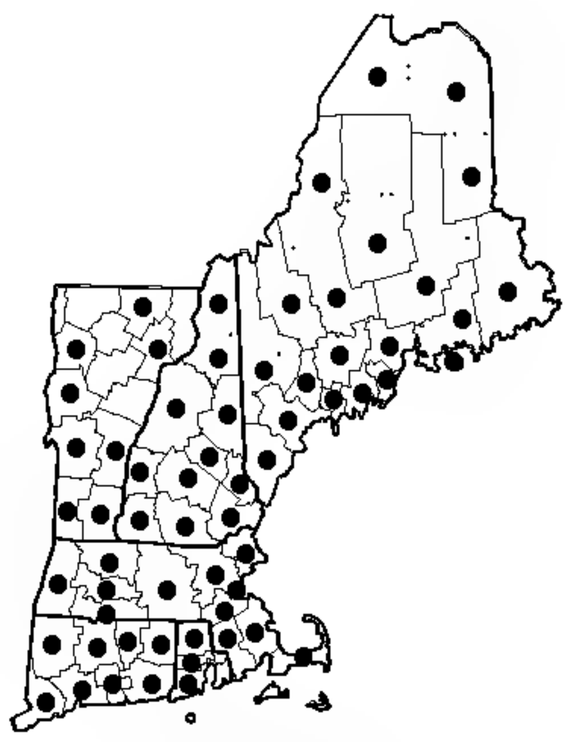
ARALIA SPINOSA



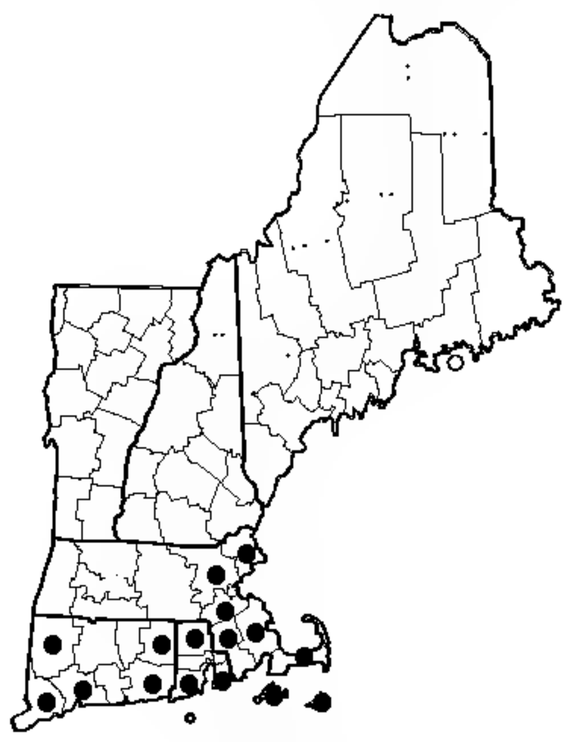
ELEUTHEROCOCCUS SIEBOLDIANUS



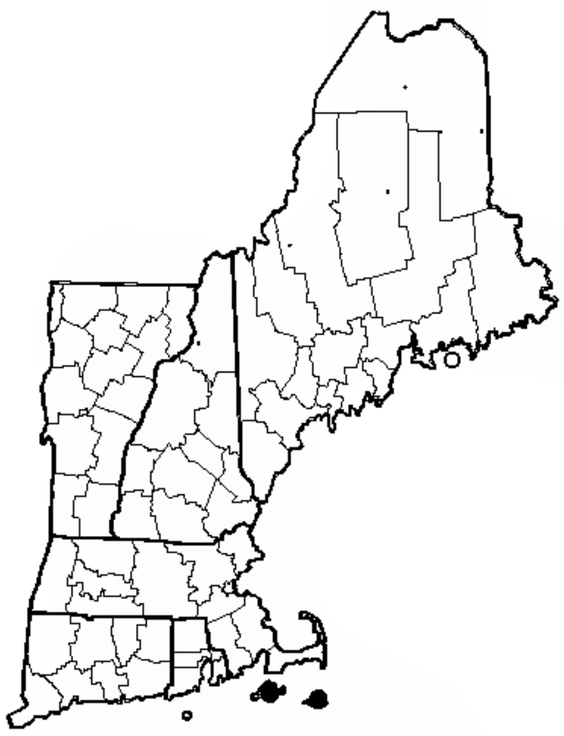
HEDERA HELIX



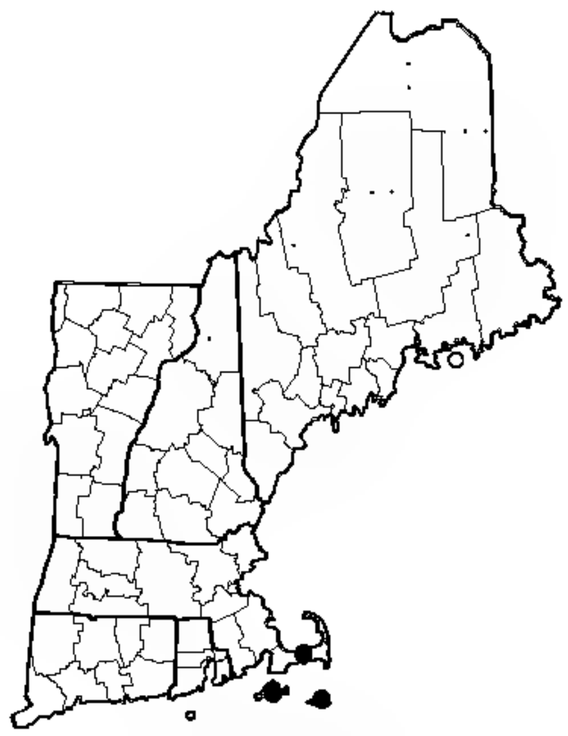
Hydrocotyle americana



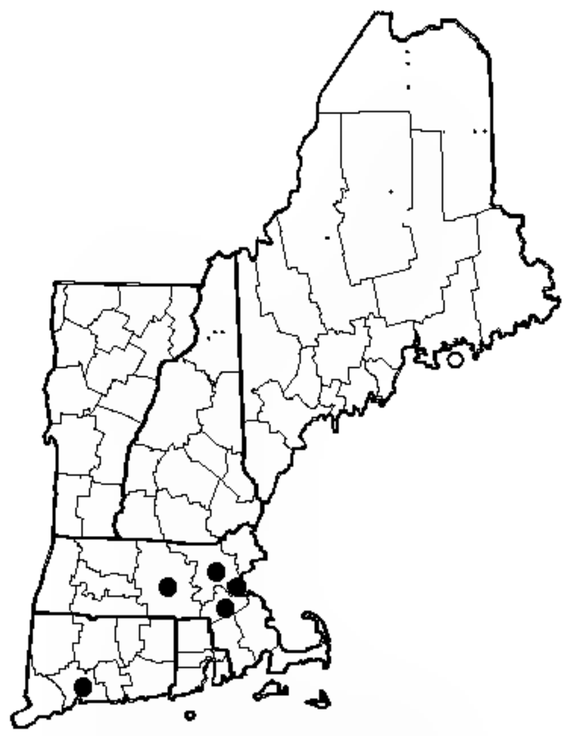
Hydrocotyle umbellata



Hydrocotyle verticillata
var *verticillata*

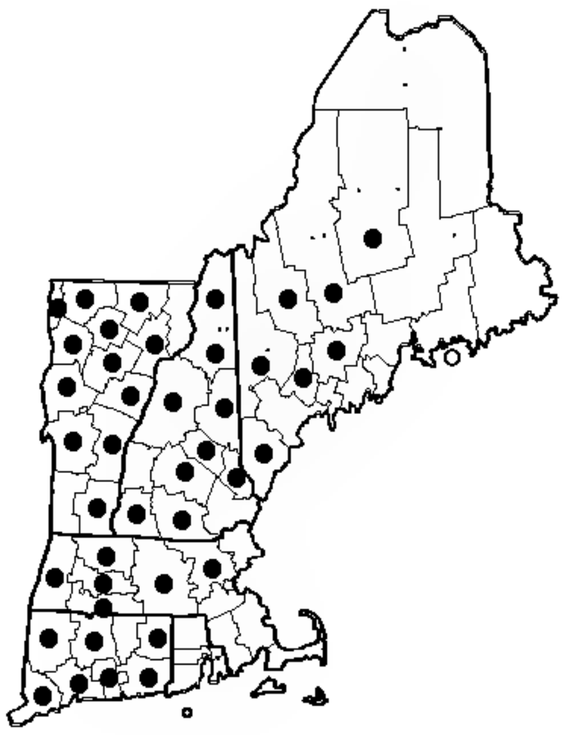


Hydrocotyle verticillata
var *triradiata*

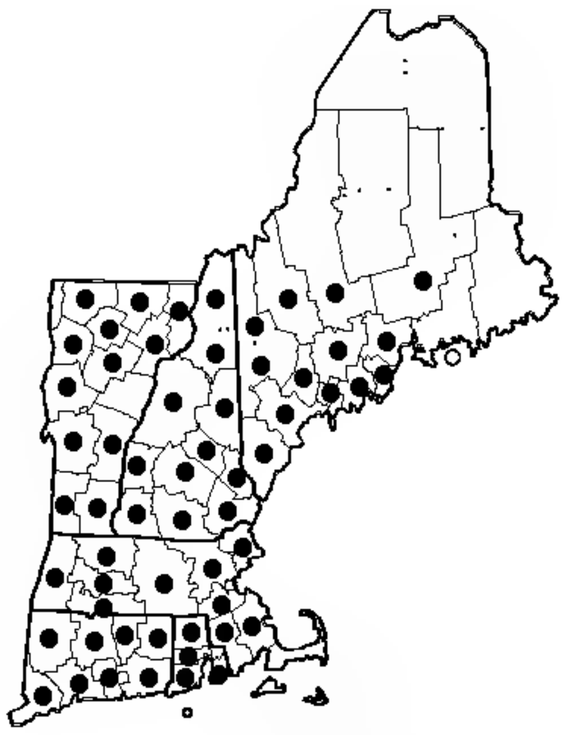


KALOPANAX SEPTEMLOBUS

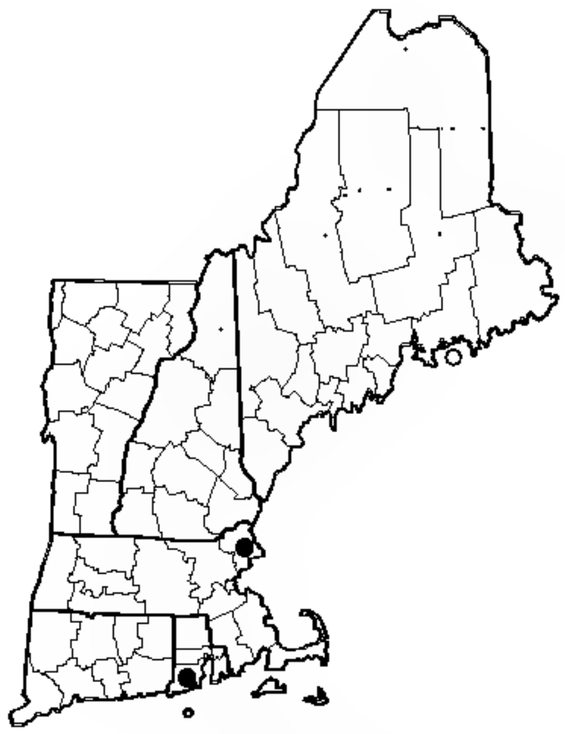
Figure 10 Distribution maps



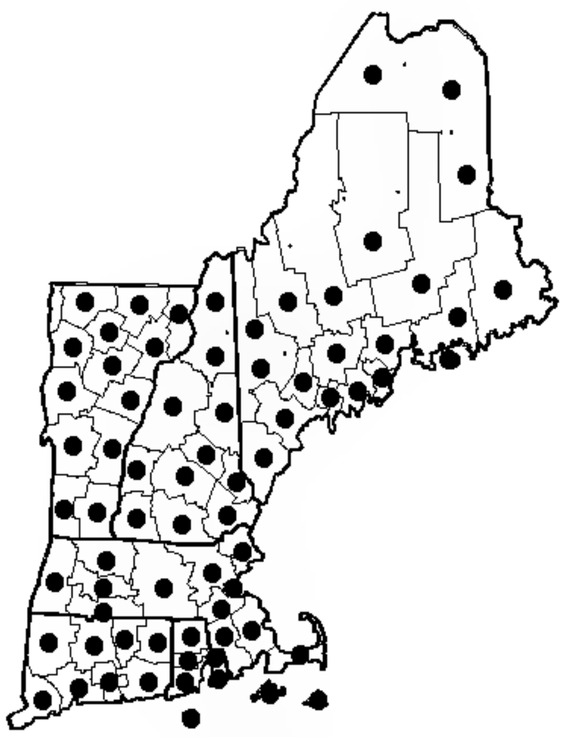
Panax quinquefolius



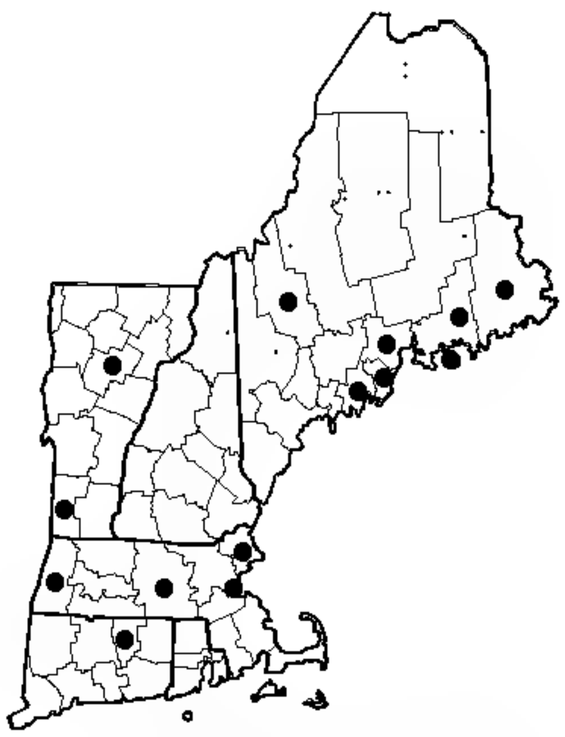
Panax trifolius



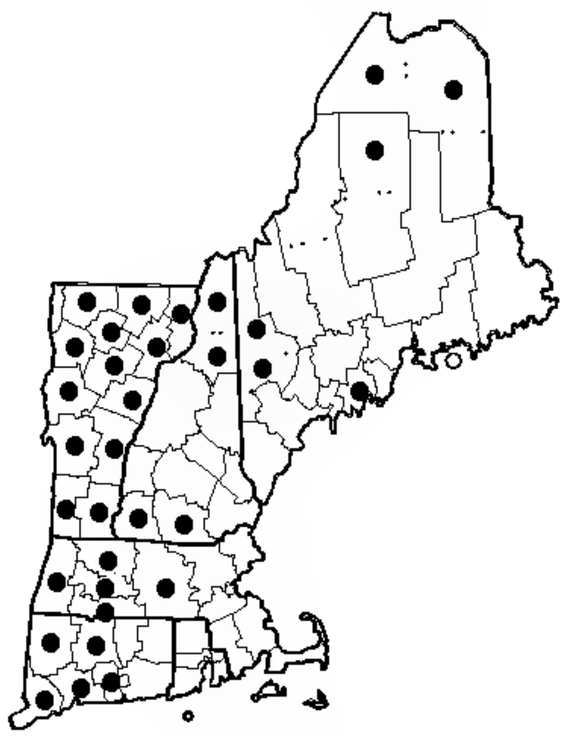
IMPATIENS BALSAMINA



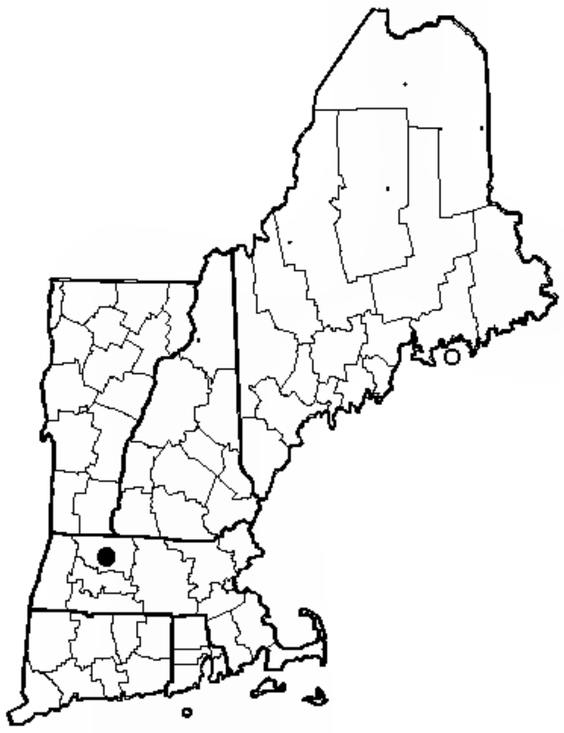
Impatiens capensis



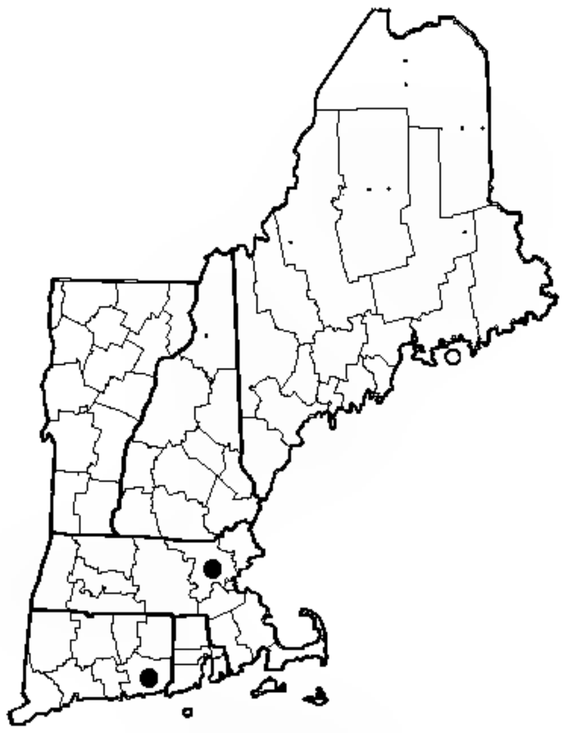
IMPATIENS GLANDULIFERA



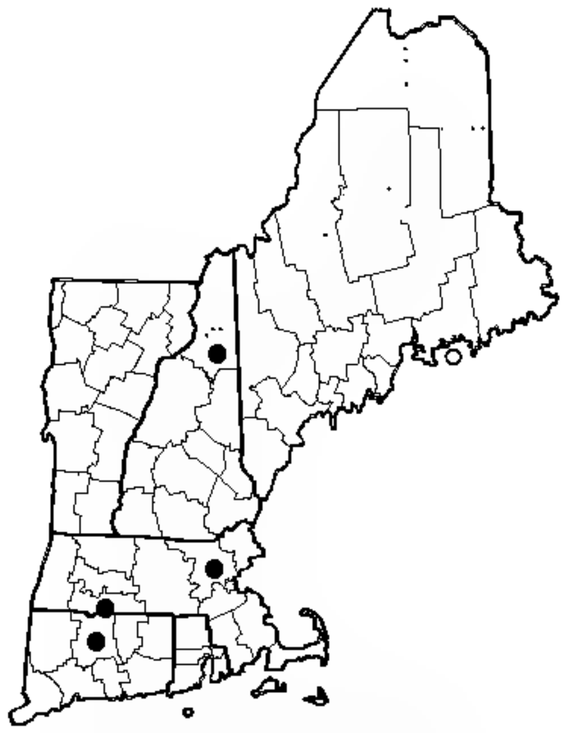
Impatiens pallida



AMSINCKIA EASTWOODIAE

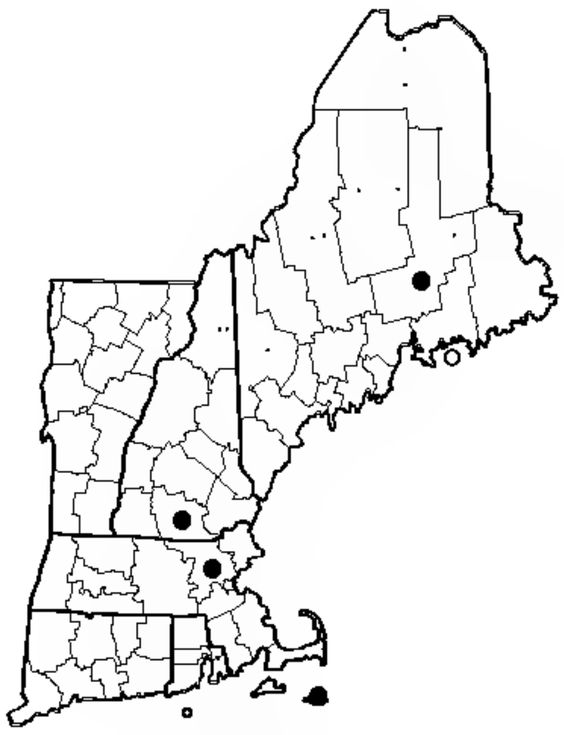


AMSINCKIA INTERMEDIA

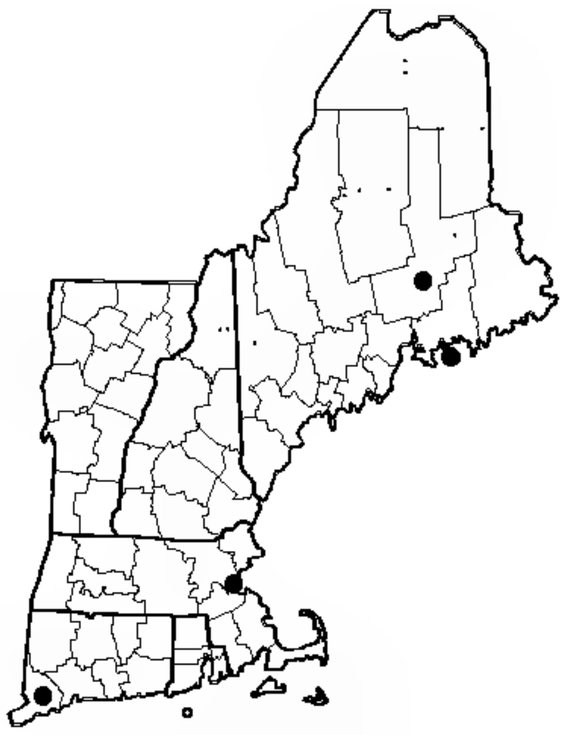


AMSINCKIA LYCOPSOIDES

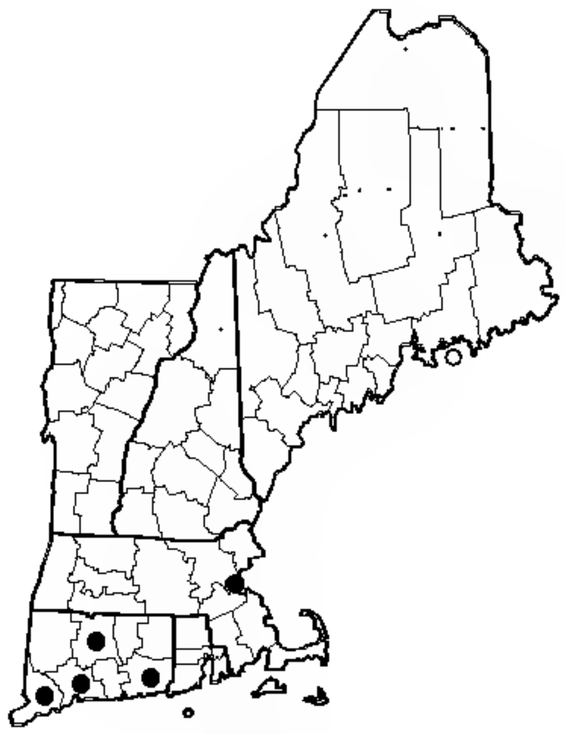
Figure 11 Distribution maps



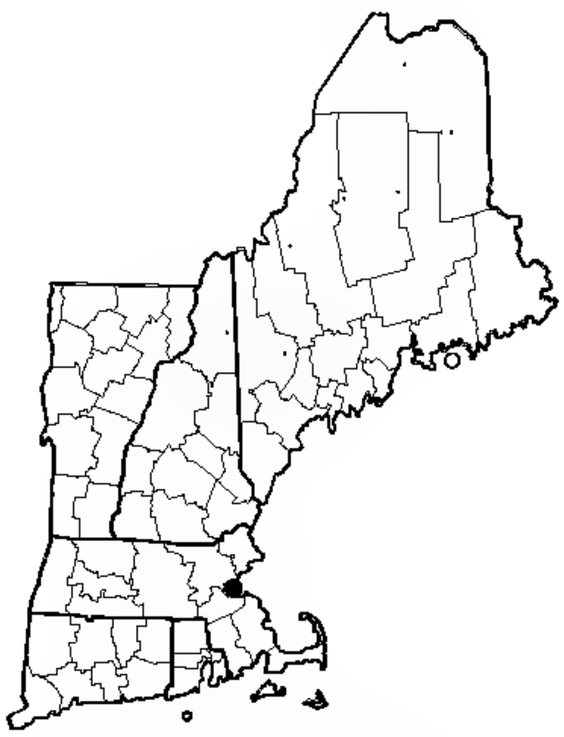
AMSINCKIA MENZIESII



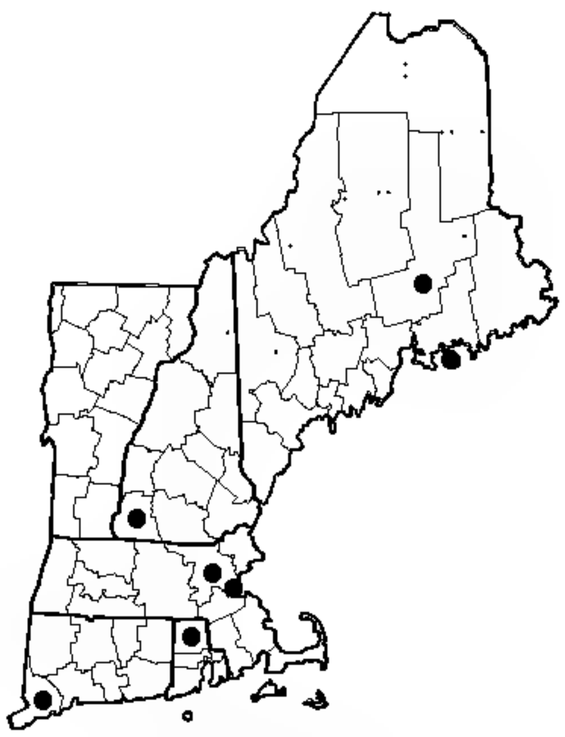
ANCHUSA ARVENSIS



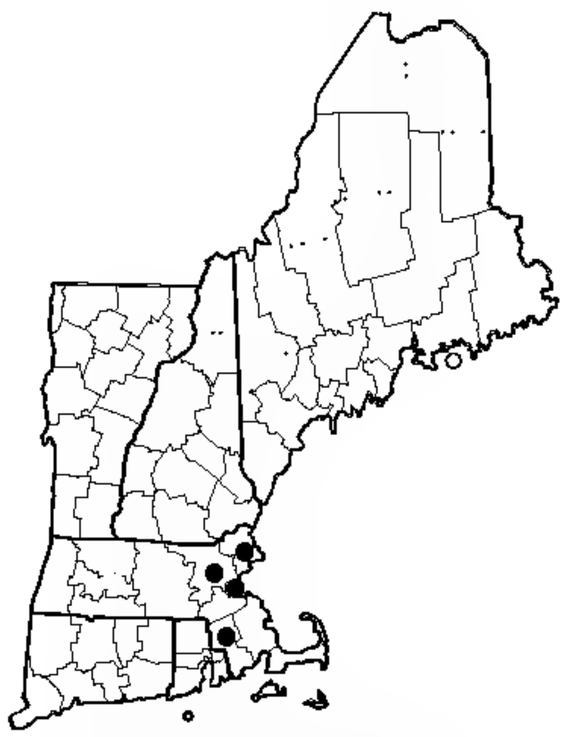
ANCHUSA AZUREA



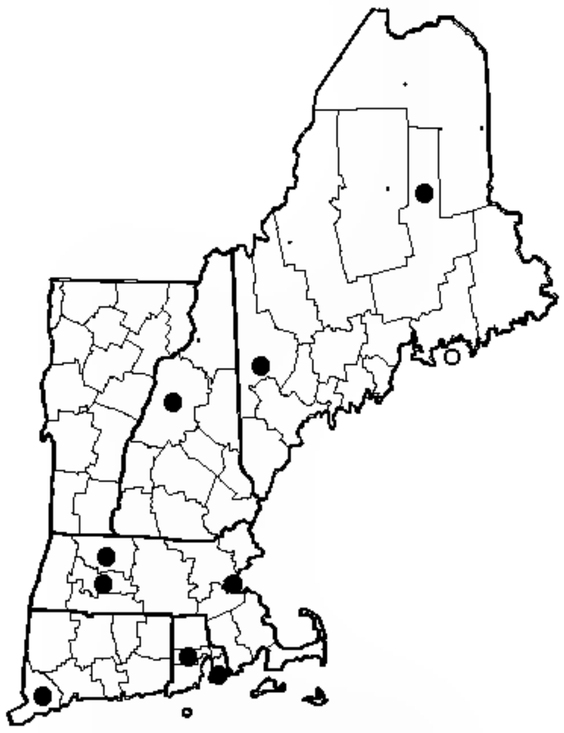
ANCHUSA LEPTOPHYLLA
subsp. *LEPTOPHYLLA*



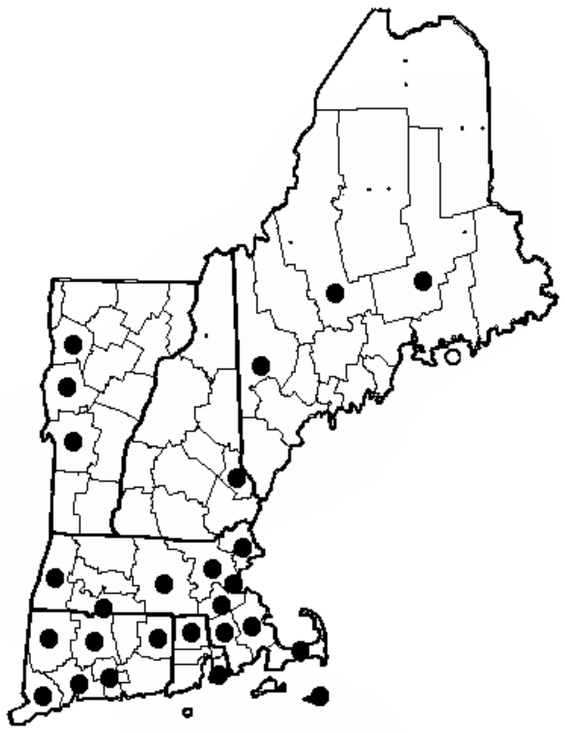
ANCHUSA OFFICINALIS



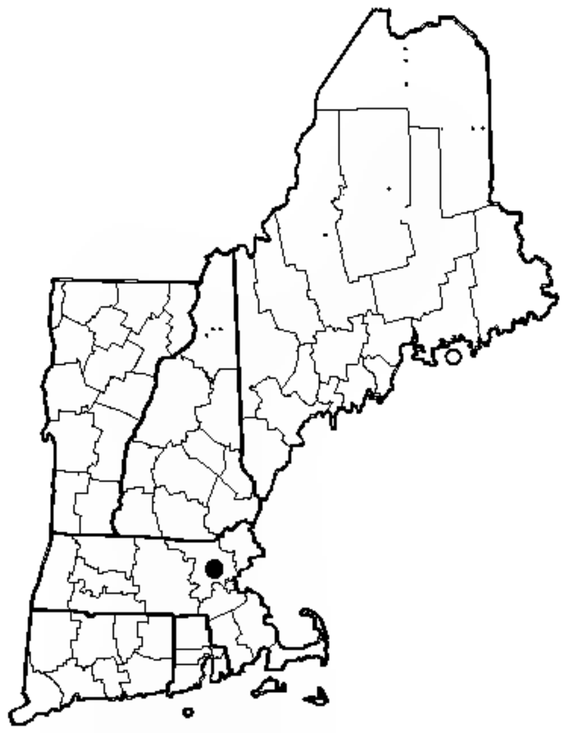
ASPERUGO PROCUMBENS



BORAGO OFFICINALIS

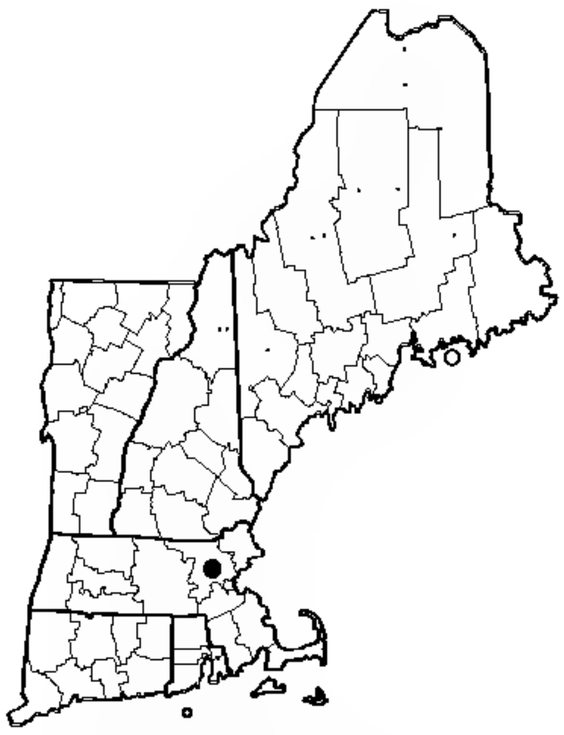


BUGLOSSOIDES ARVENSIS

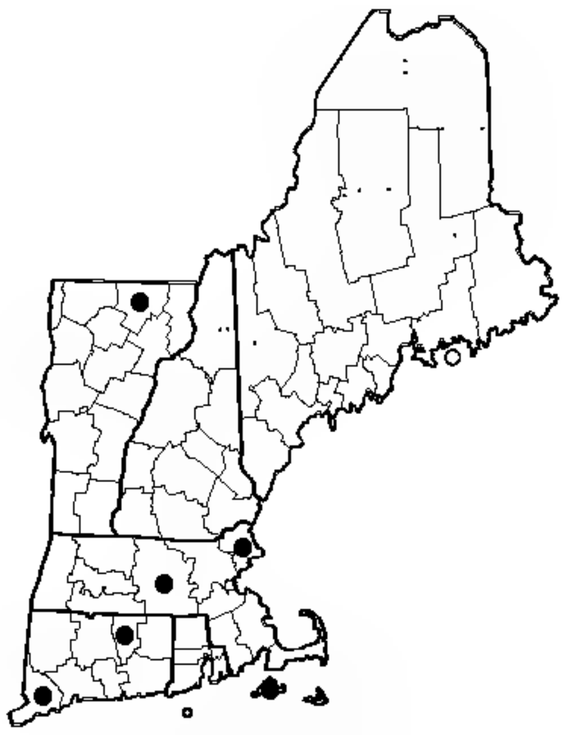


CRYPTANTHA AMBIGUA

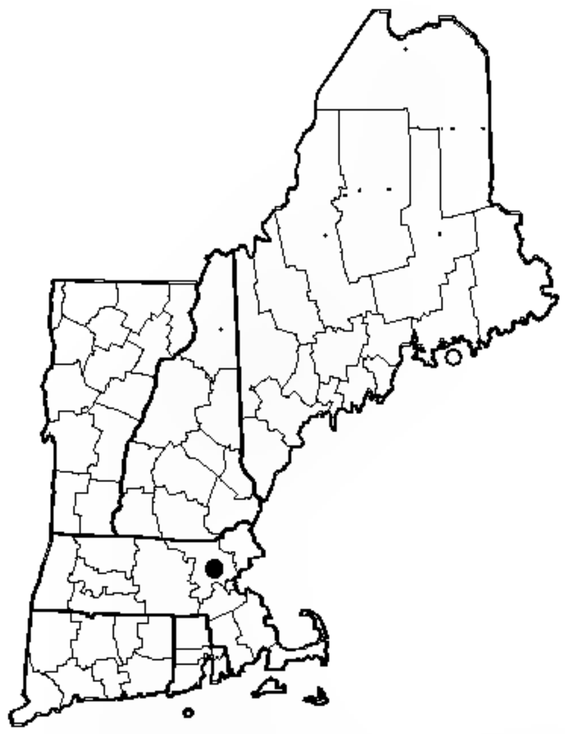
Figure 12 Distribution maps



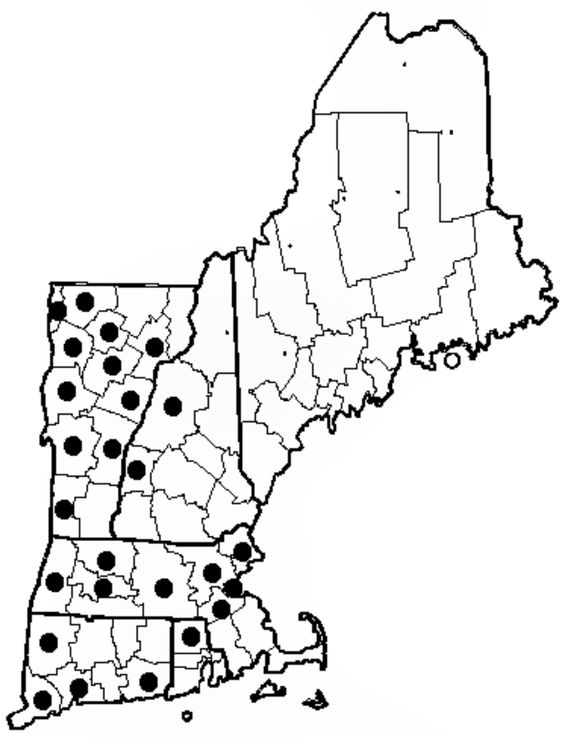
CRYPTANTHA INTERMEDIA



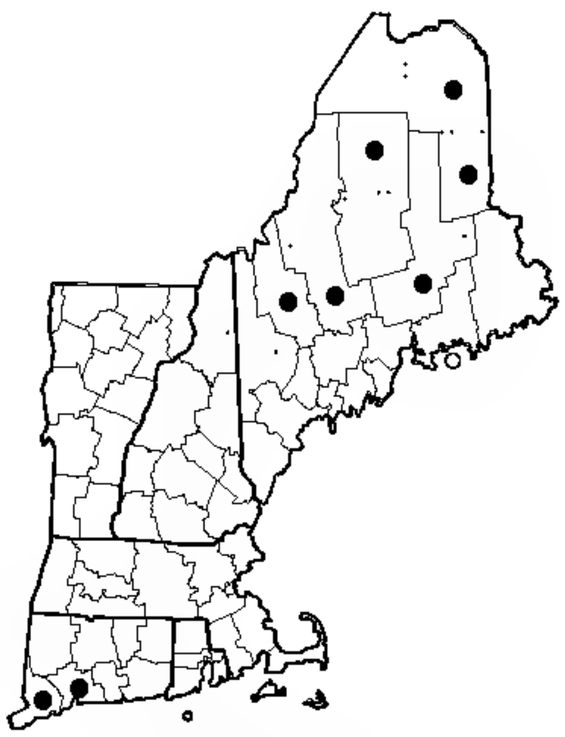
CYNOGLOSSUM AMABILE



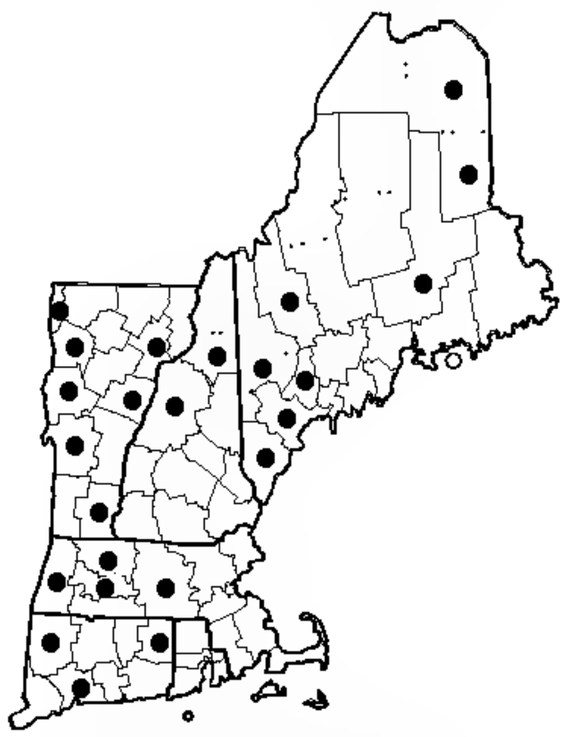
CYNOGLOSSUM MICROGLOCHIN



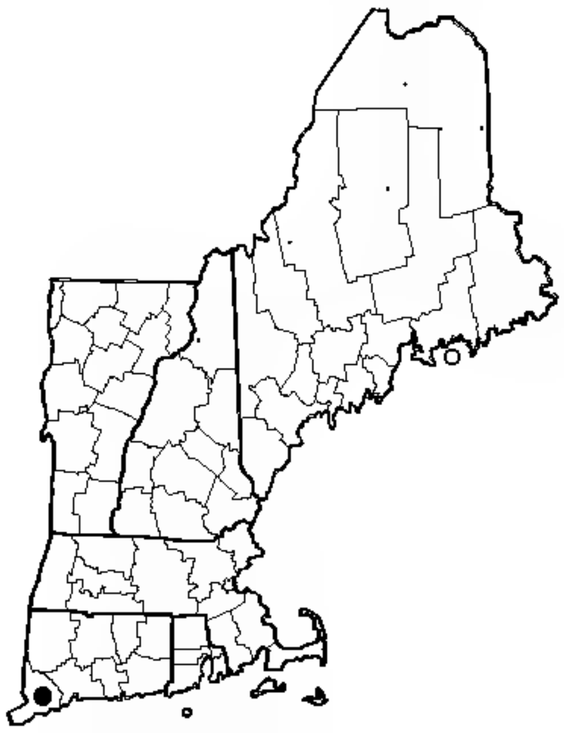
CYNOGLOSSUM OFFICINALE



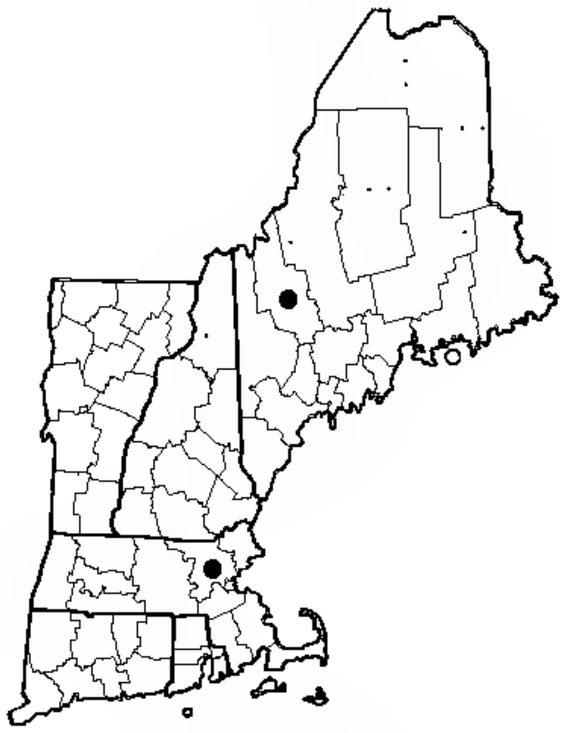
Cynoglossum virginianum var *virginianum*



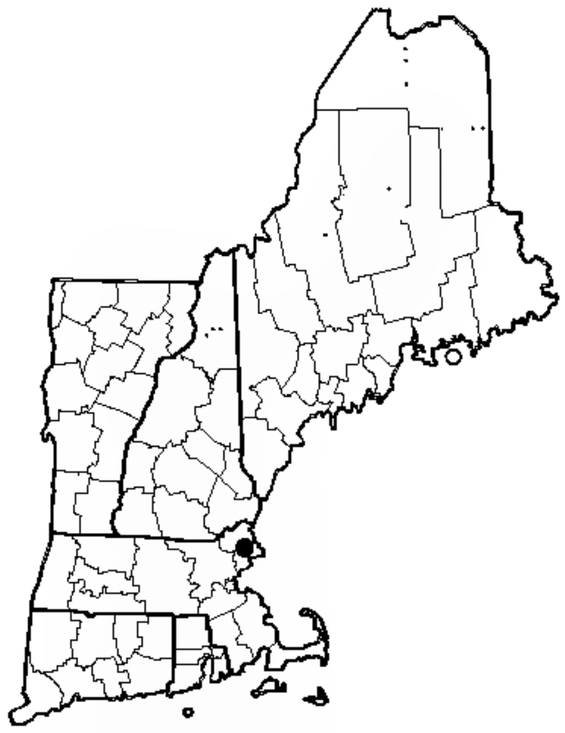
Cynoglossum virginianum var *boreale*



CYNOGLOTTIS BARRELIERI

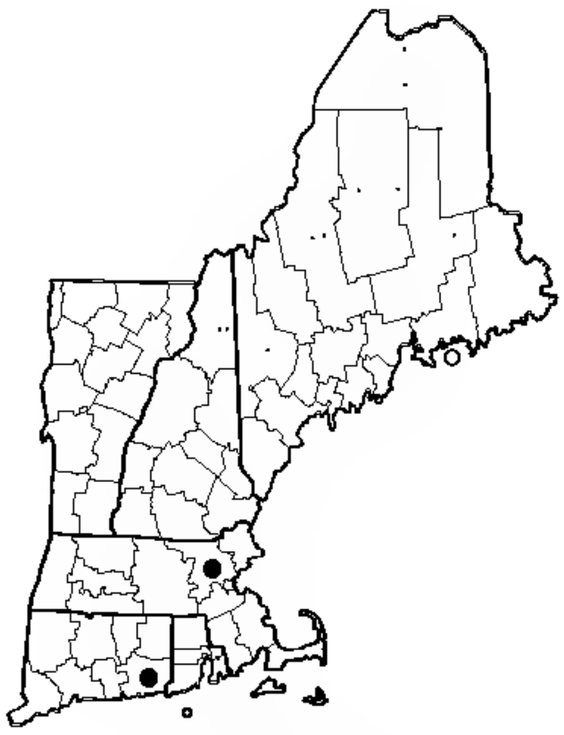


ECHIUM CRETICUM

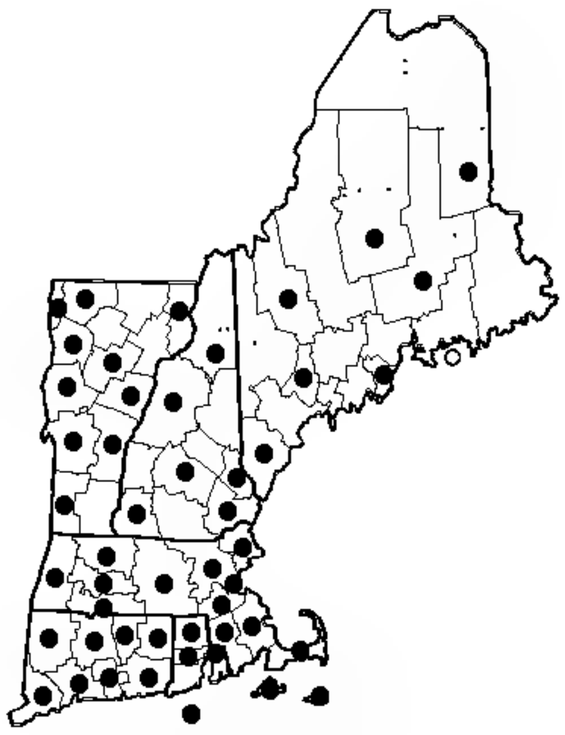


ECHIUM PLANTAGINEUM

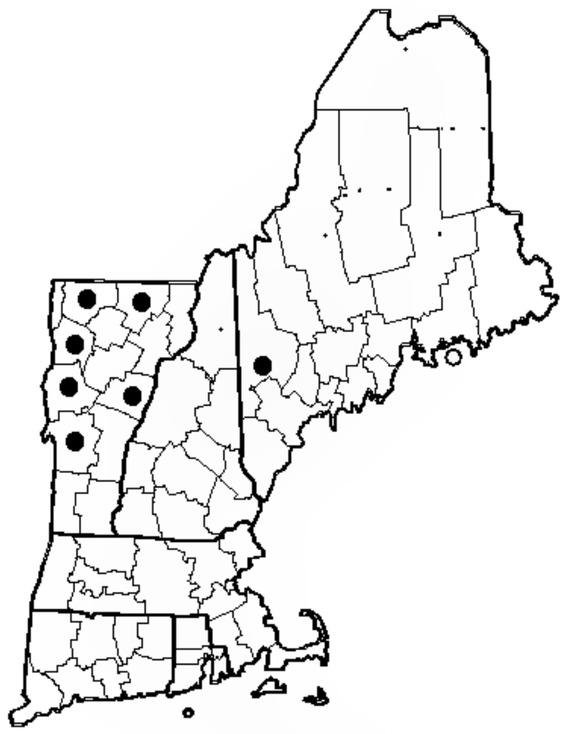
Figure 13 Distribution maps



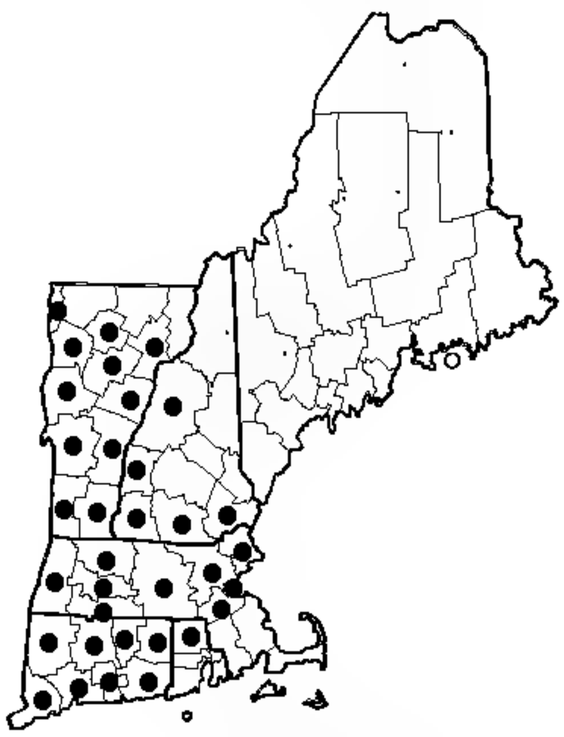
ECHIUM PUSTULATUM



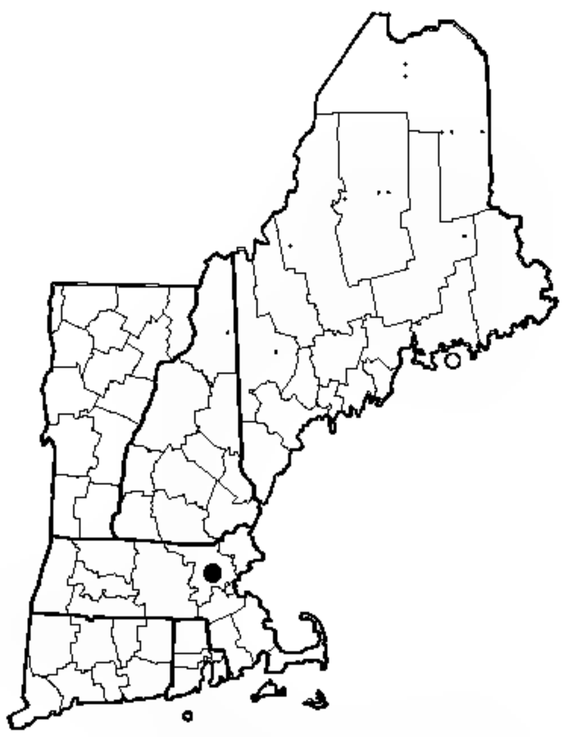
ECHIUM VULGARE



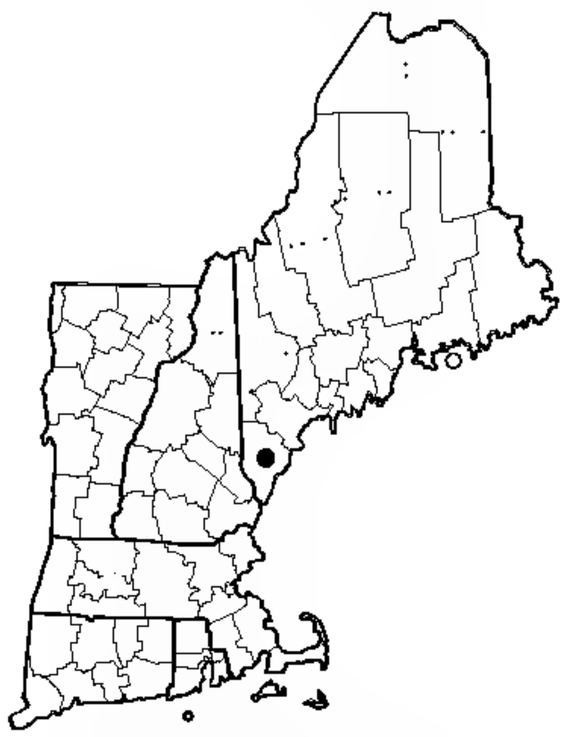
Hackelia deflexa
var *americana*



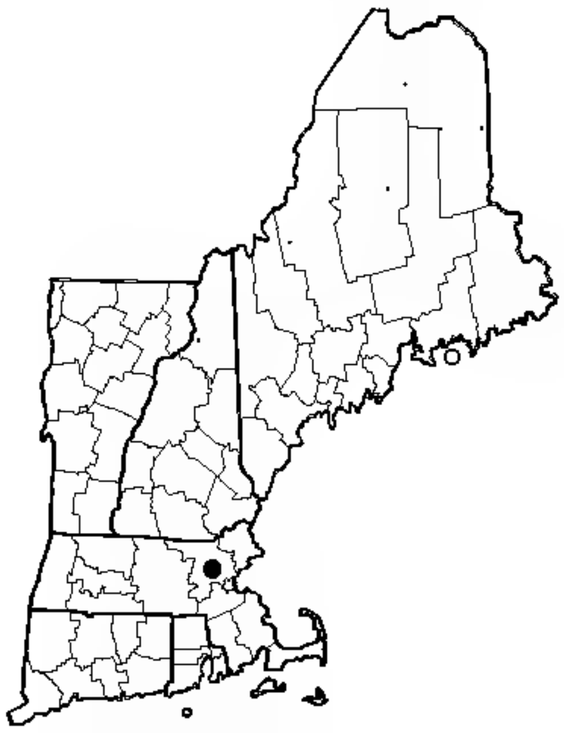
Hackelia virginiana



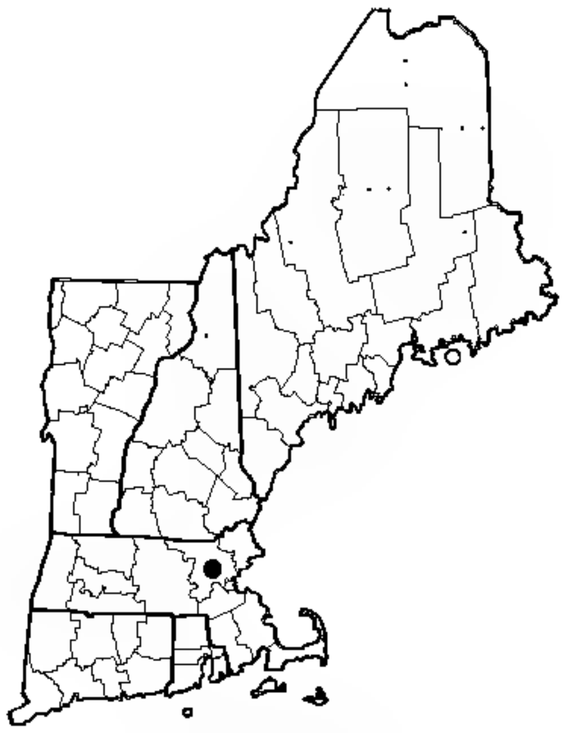
HELIOTROPIUM AMPLEXICAULE



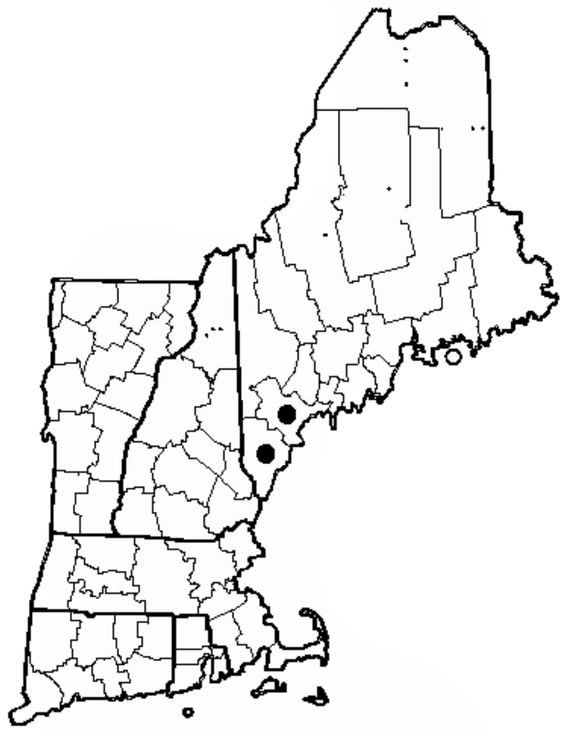
HELIOTROPIUM CURASSIVICUM
var *CURASSAVICUM*



HELIOTROPIUM EUROPAEUM

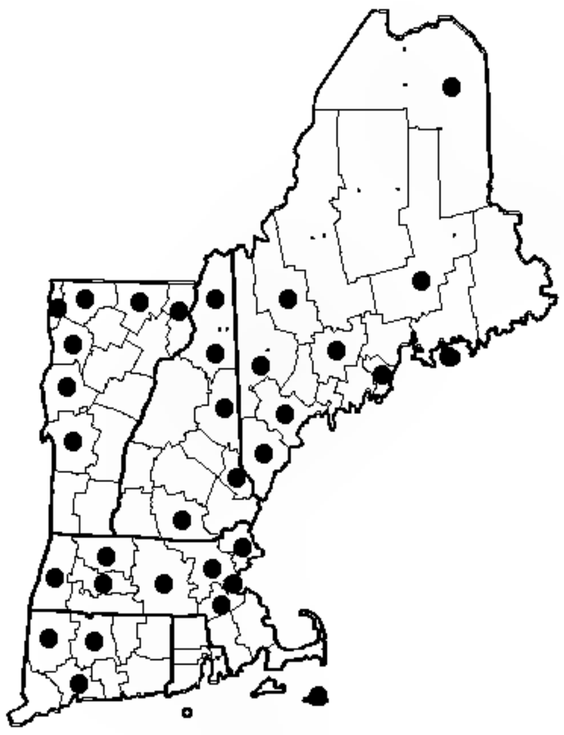


HELIOTROPIUM INDICUM

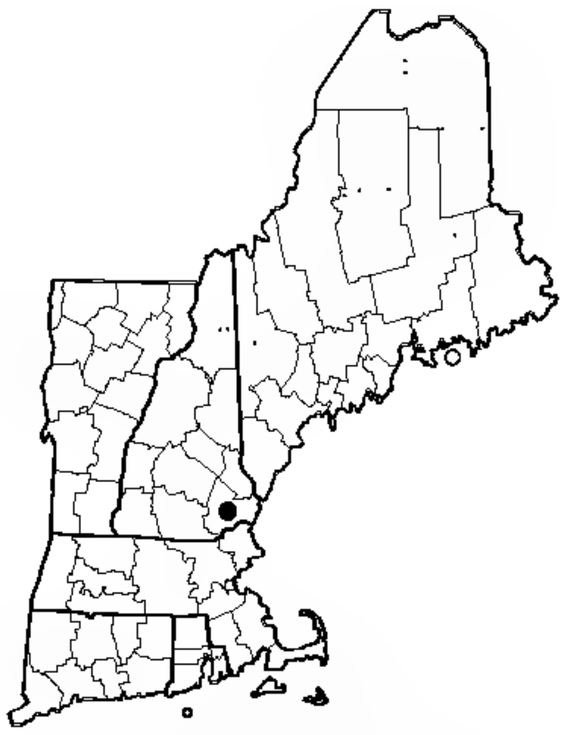


LAPPULA OCCIDENTALIS
var *OCCIDENTALIS*

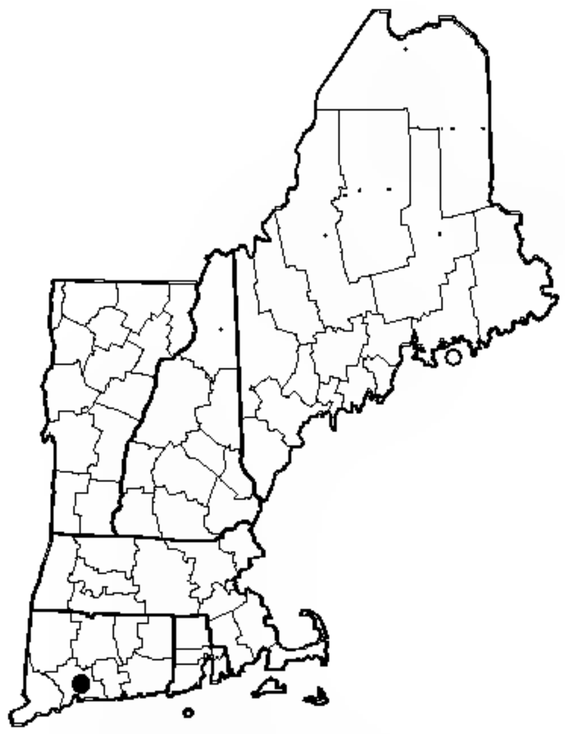
Figure 14 Distribution maps



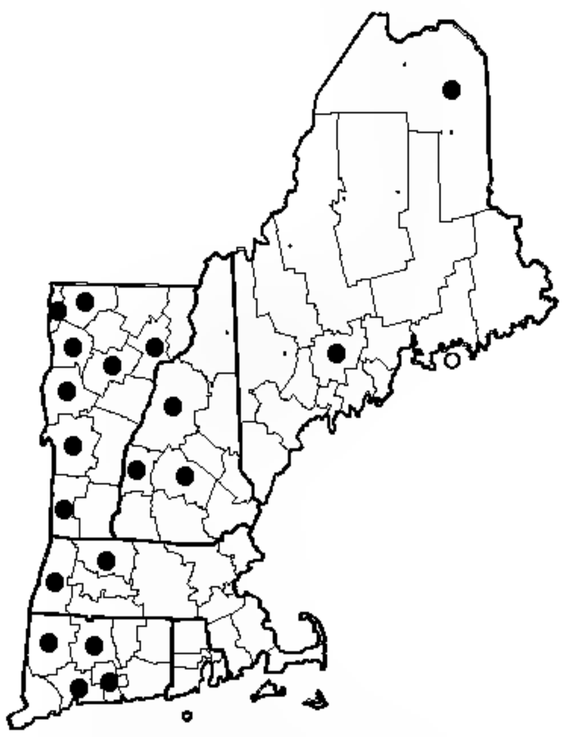
LAPPULA SQUARROSA



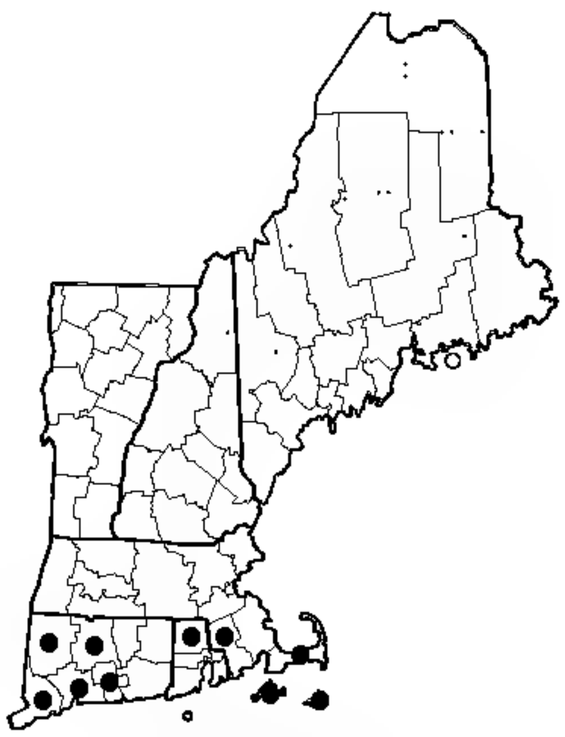
LITHOSPERMUM CANESCENS



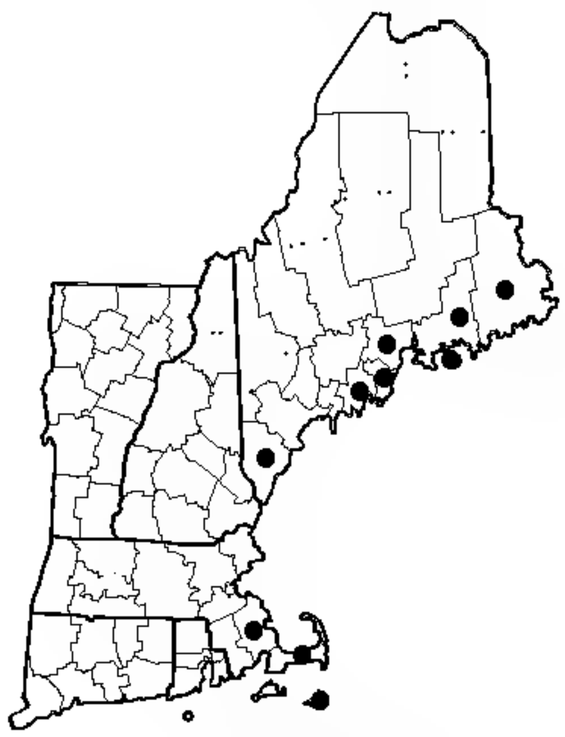
LITHOSPERMUM OCCIDENTALE



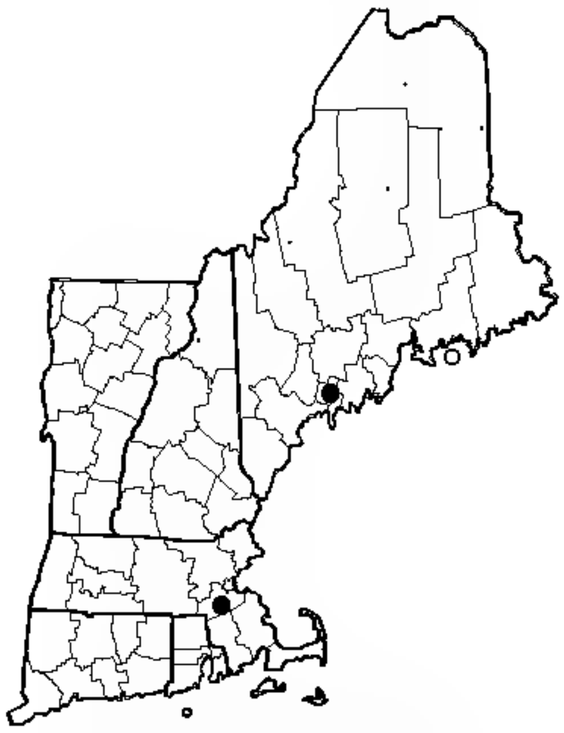
LITHOSPERMUM OFFICINALE



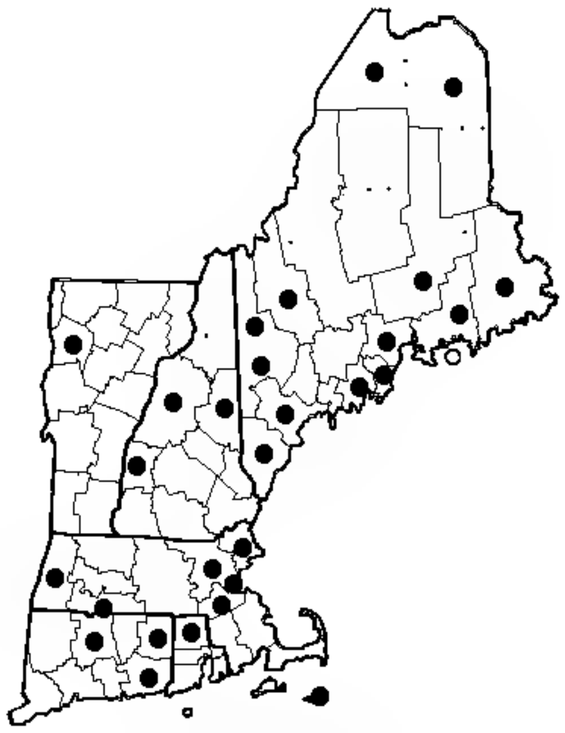
Lithospermum virginianum



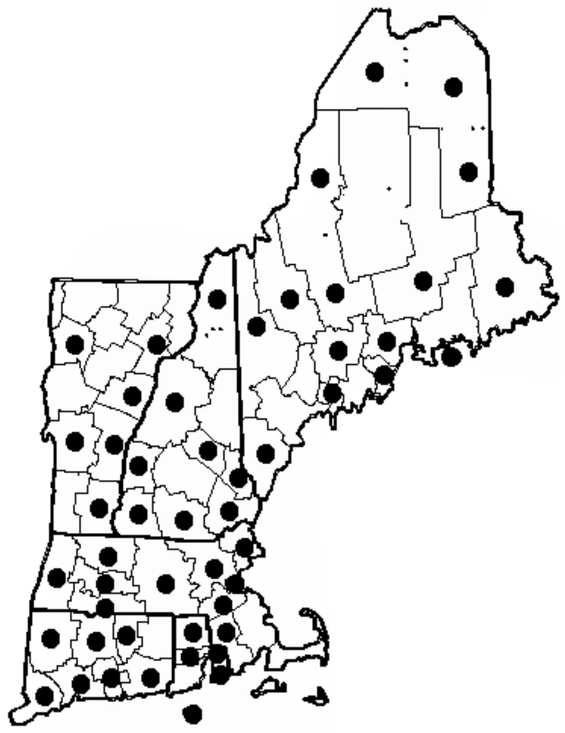
Mertensia maritima subsp. *tenella*



MERTENSIA VIRGINICA

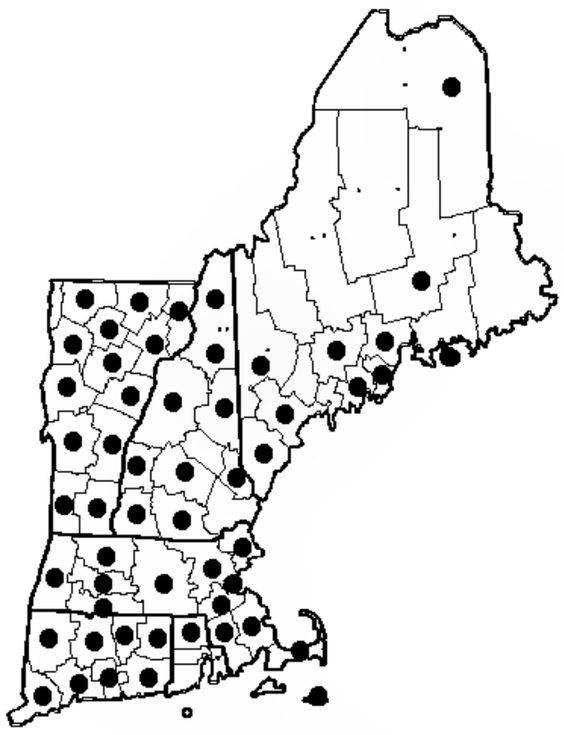


MYOSOTIS ARVENSIS

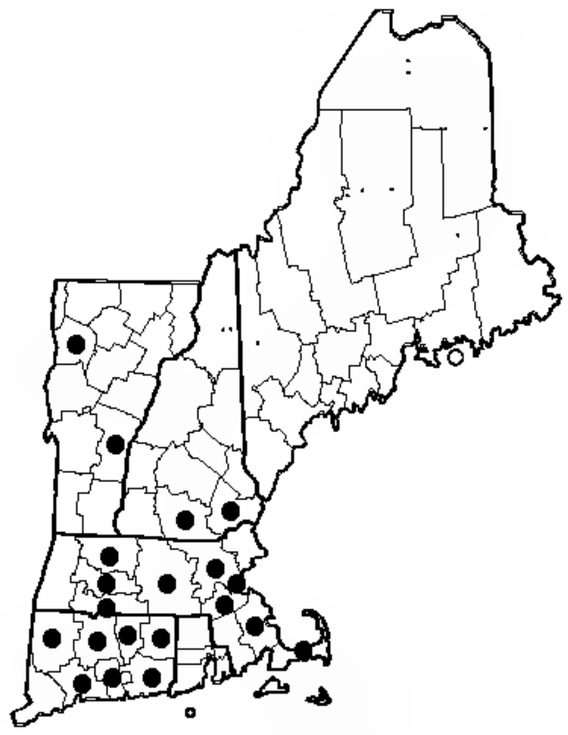


Myosotis laxa

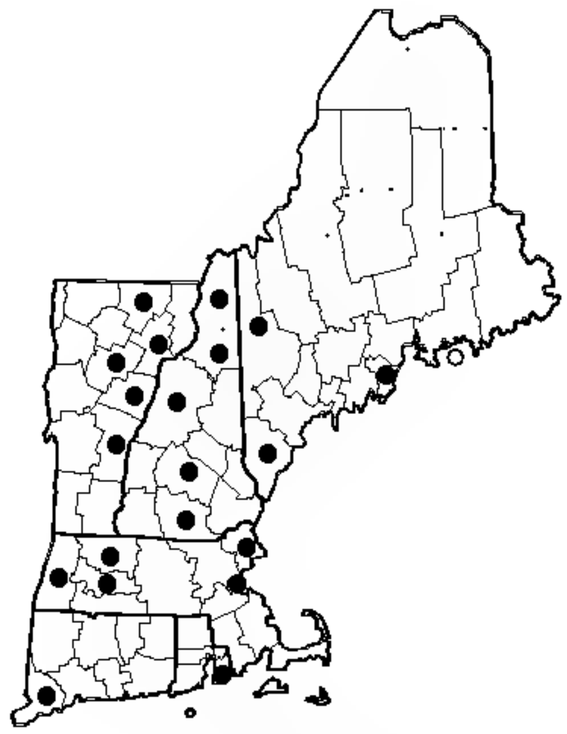
Figure 15 Distribution maps



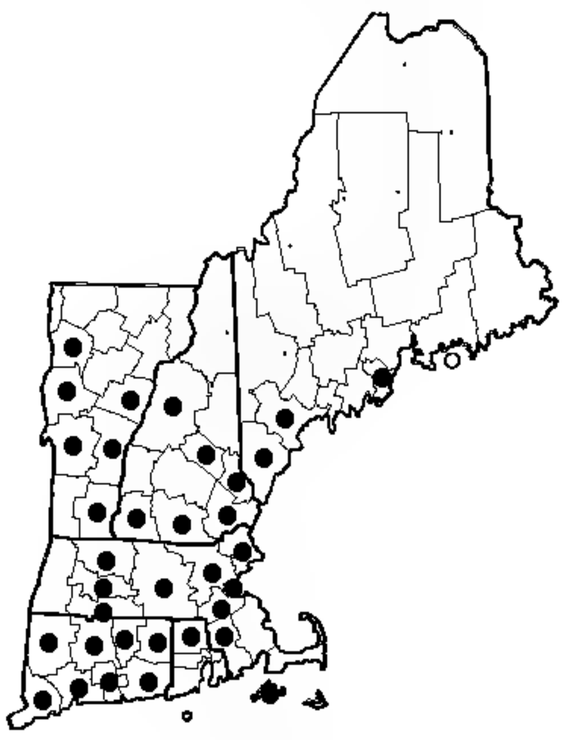
MYOSOTIS SCORPIOIDES



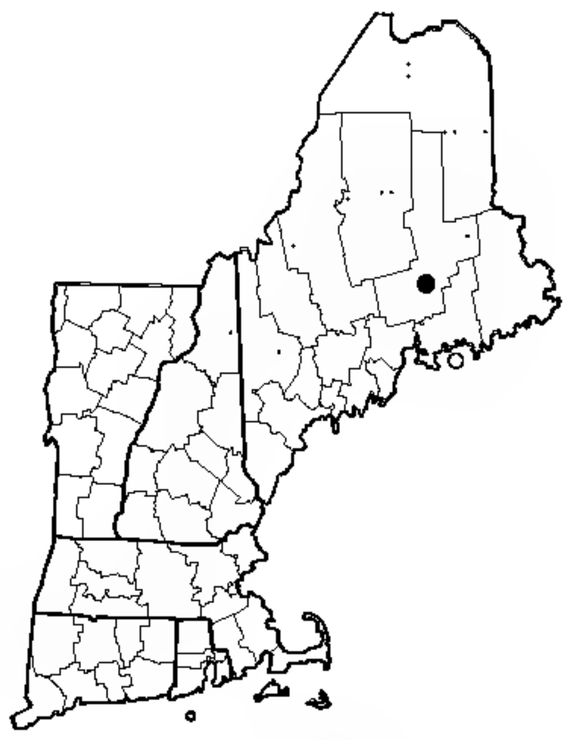
MYOSOTIS STRICTA



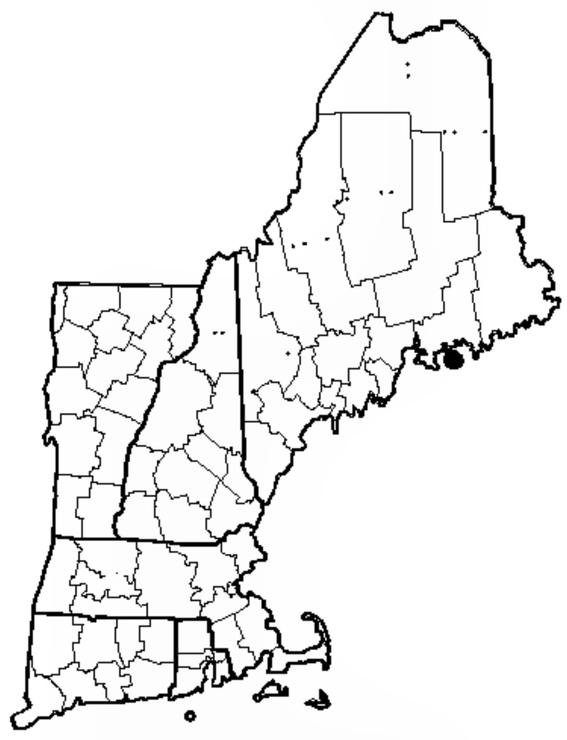
MYOSOTIS SYLVATICA



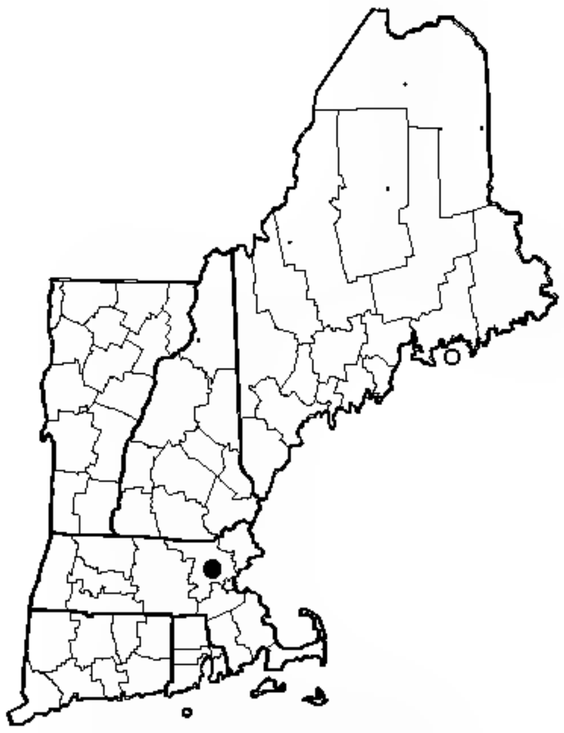
Myosotis verna



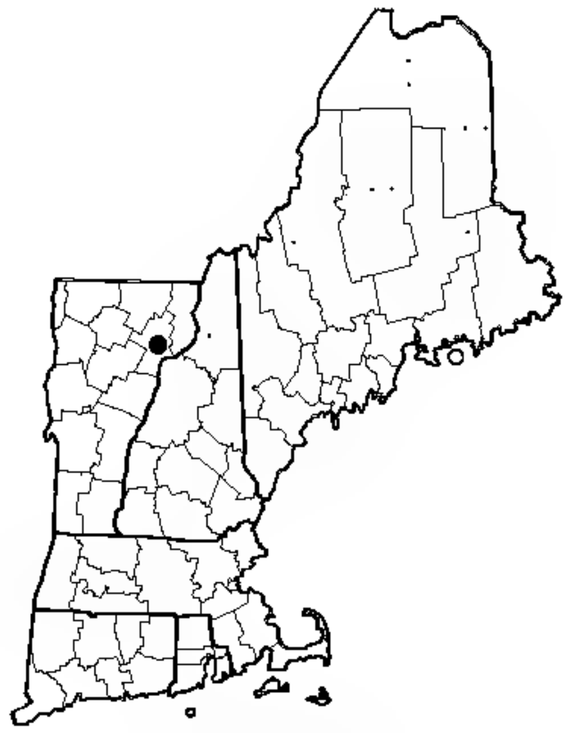
NONEA ROSEA



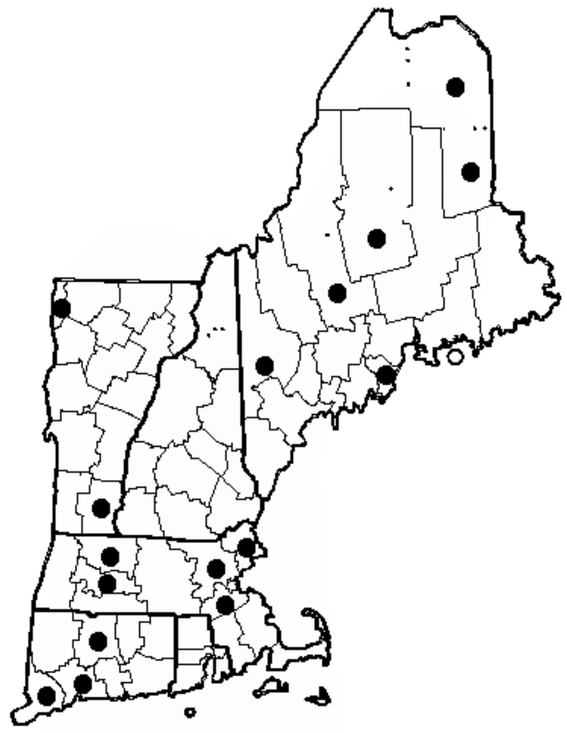
PENTAGLOTTIS SEMPERVIRENS



PLAGIOBOTHRYS RETICULATUS

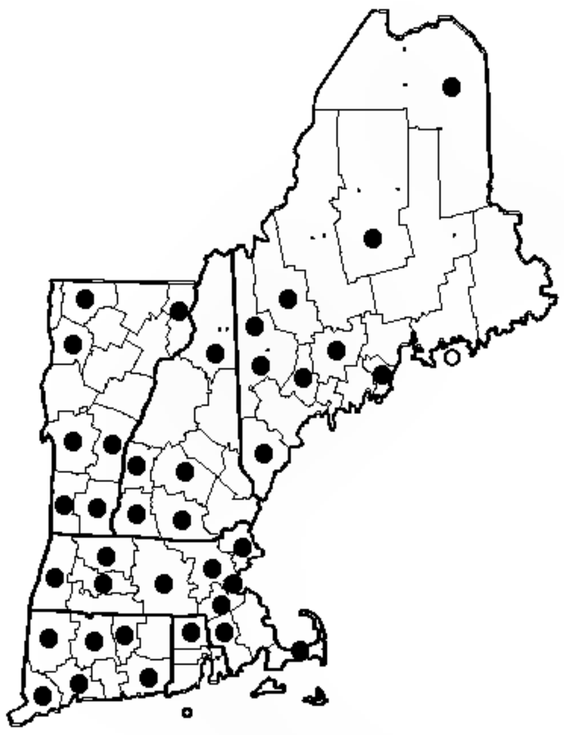


PULMONARIA SACCHARATA

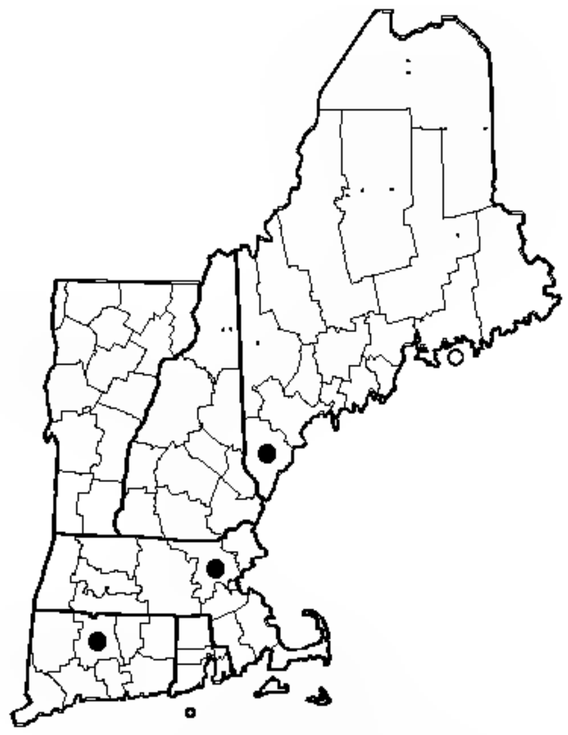


SYMPHYTUM ASPERUM

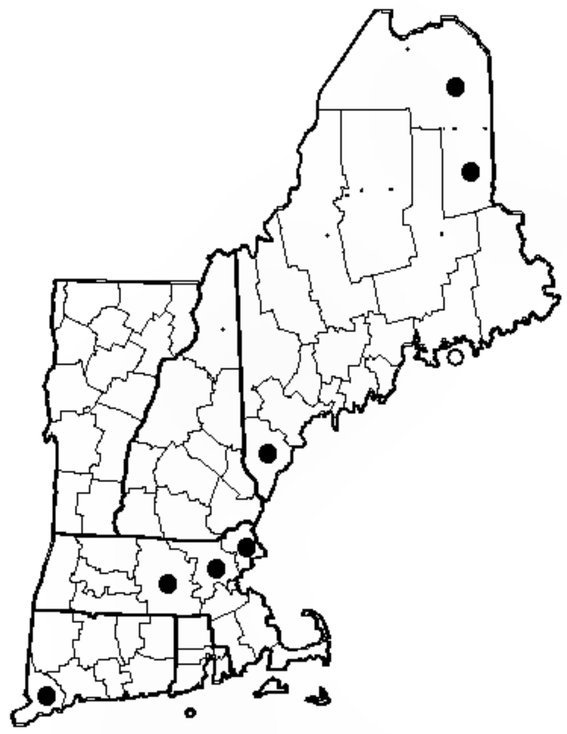
Figure 16 Distribution maps



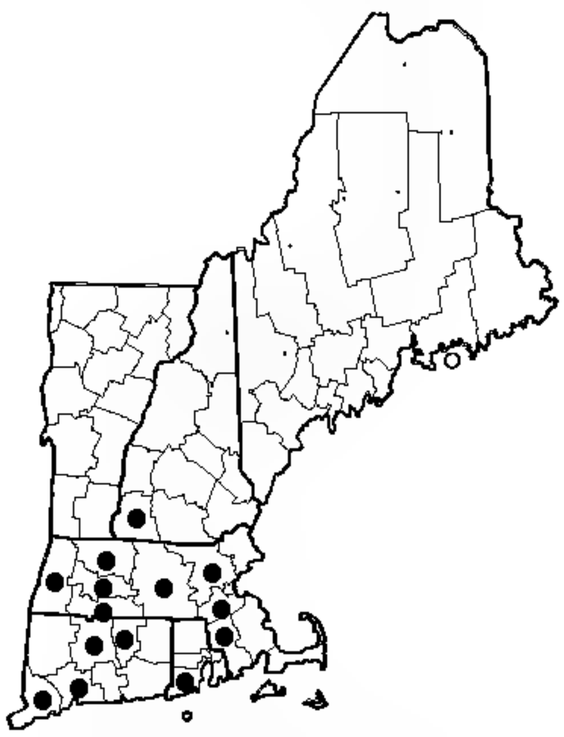
SYMPHYTUM OFFICINALE



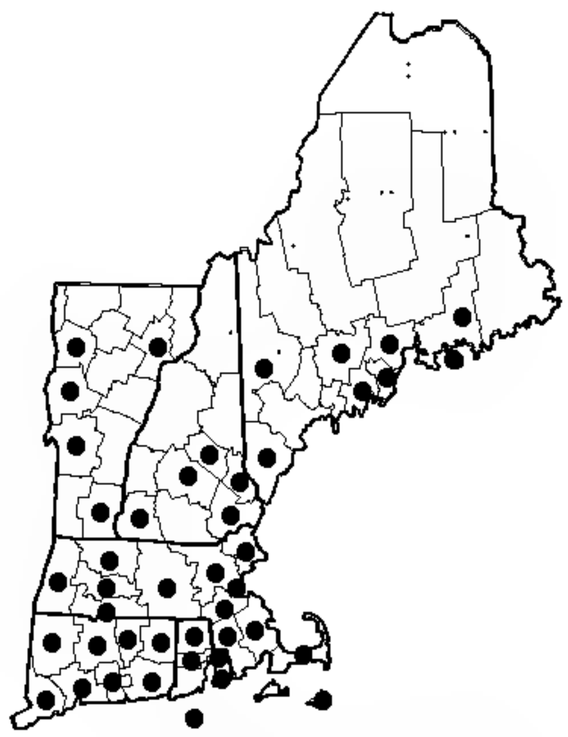
SYMPHYTUM TUBEROSUM



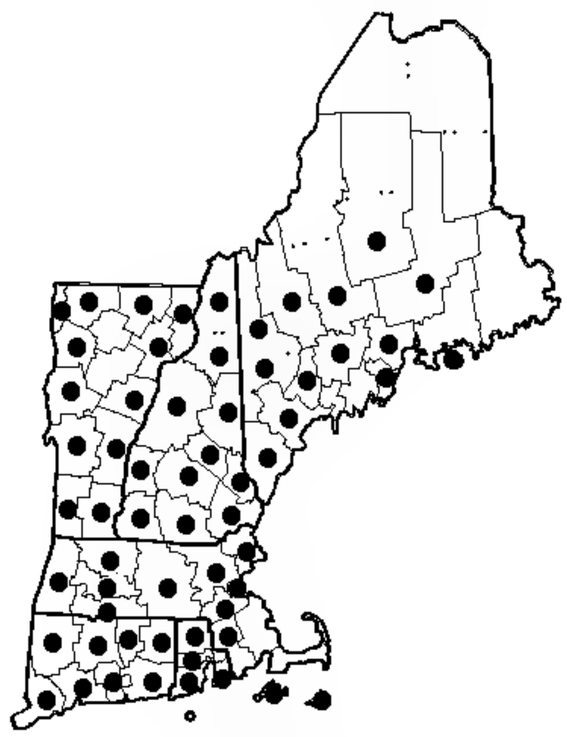
SYMPHYTUM X UPLANDICUM



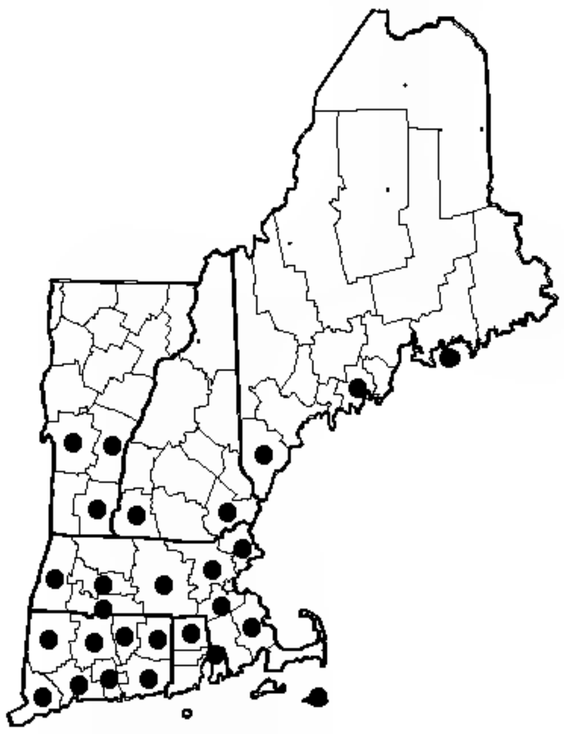
PACHYSANDRA TERMINALIS



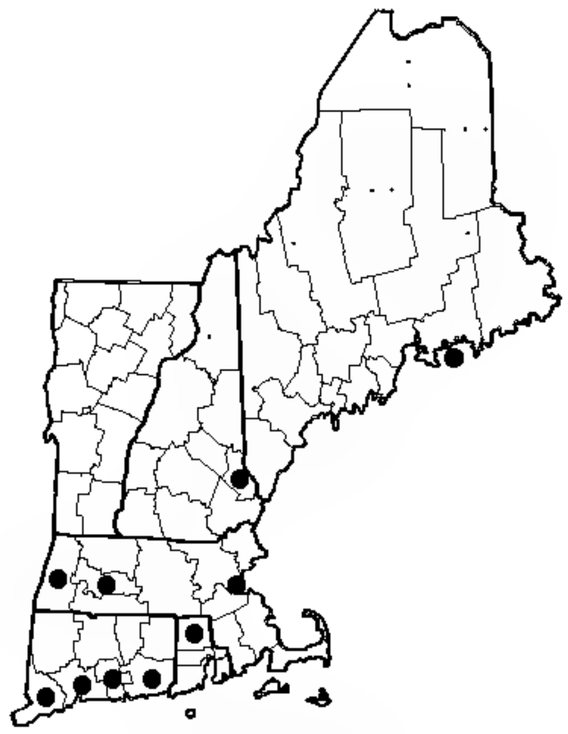
CELASTRUS ORBICULATUS



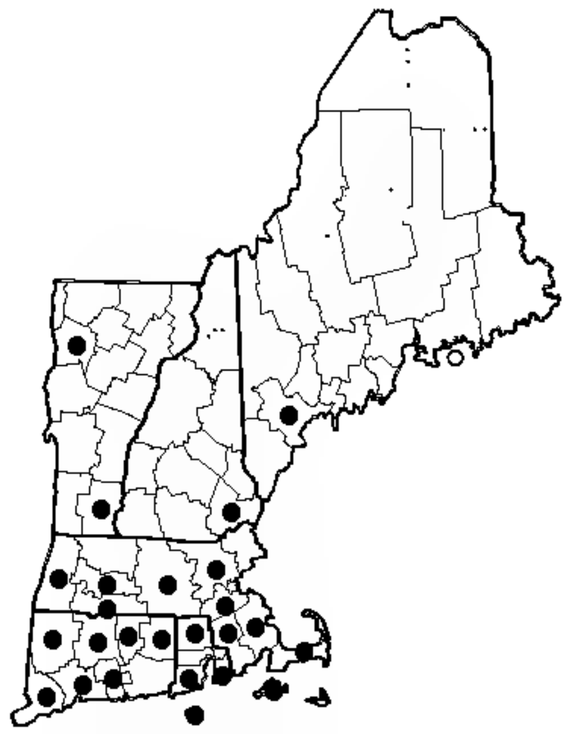
Celastrus scandens



EUONYMUS ALATUS

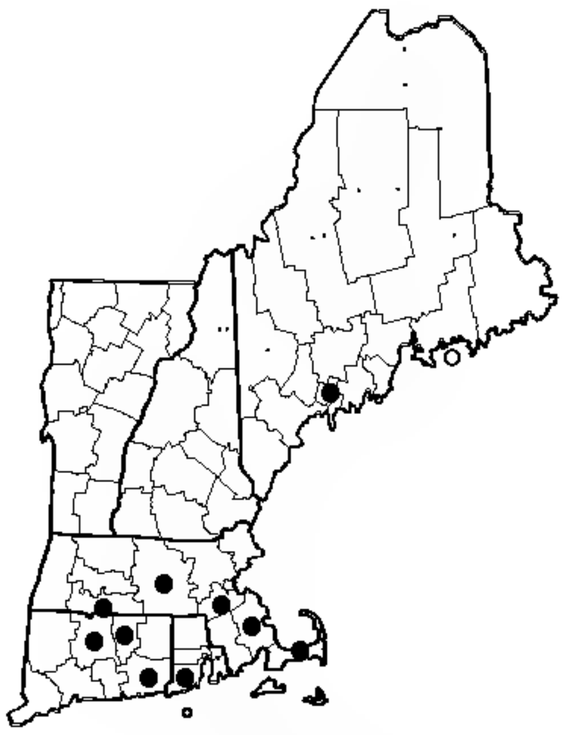


EUONYMUS ATROPURPUREUS
var *ATROPURPUREUS*

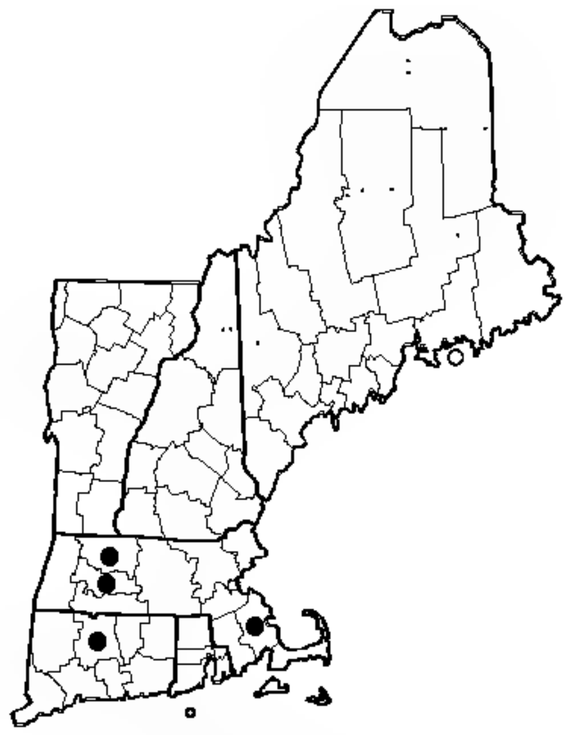


EUONYMUS EUROPAEUS

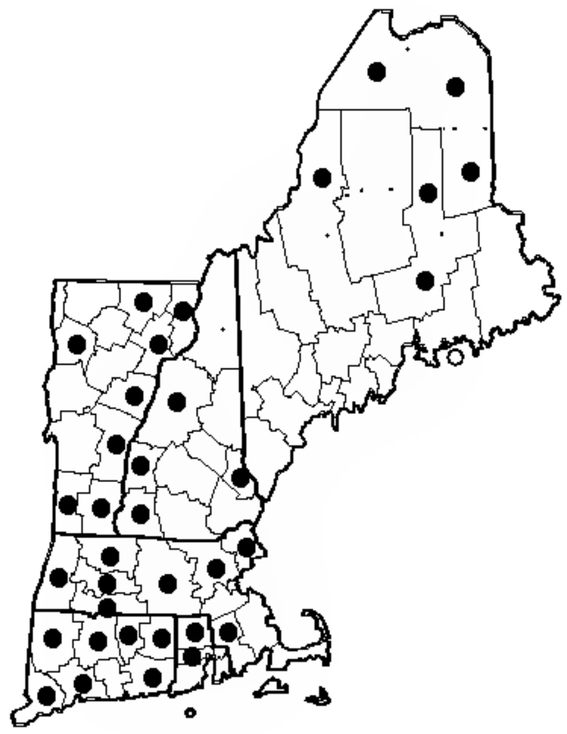
Figure 17 Distribution maps



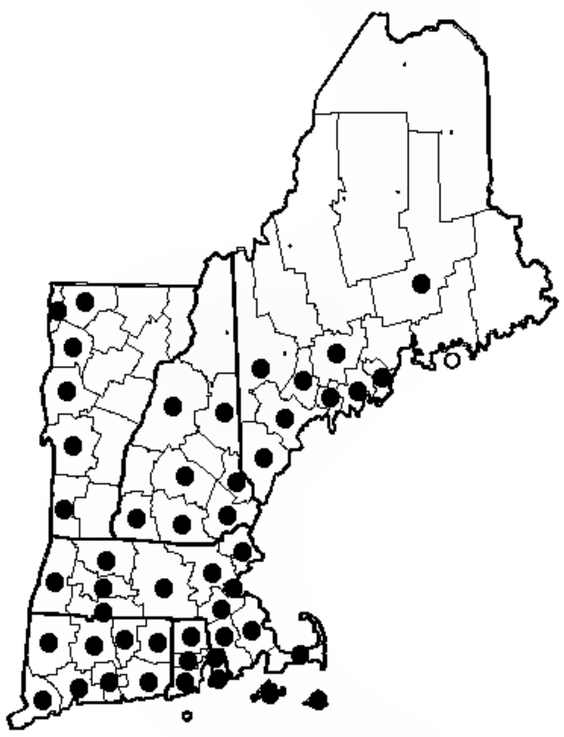
EUONYMUS FORTUNEI
var *FORTUNEI*



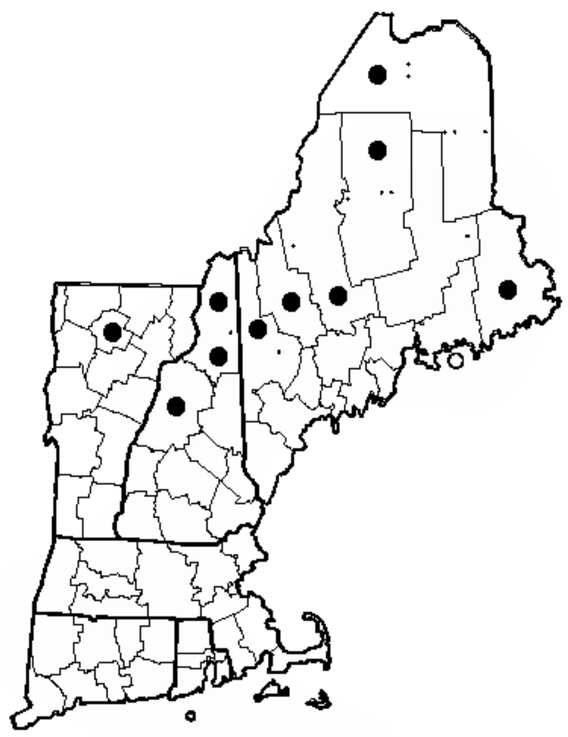
EUONYMUS FORTUNEI
var *RADICANS*



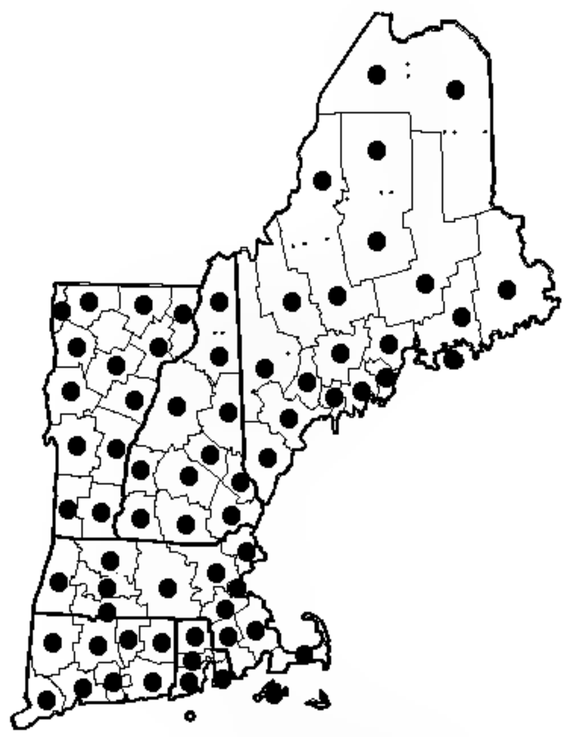
Parnassia glauca



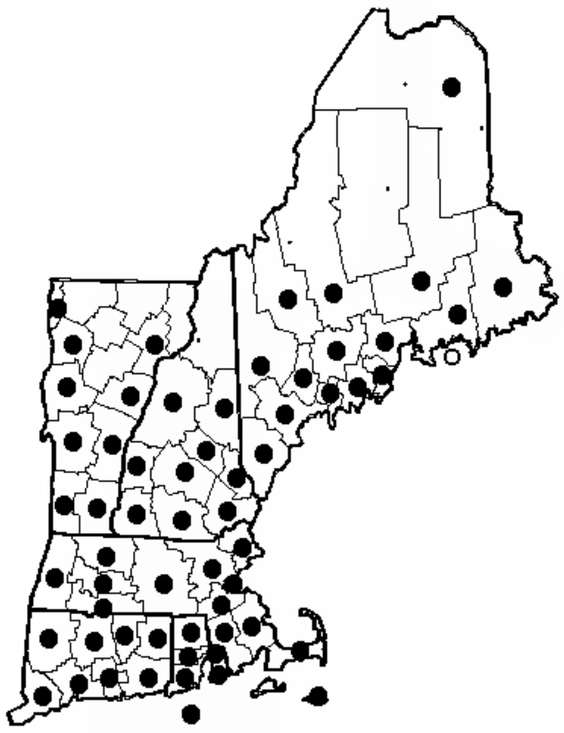
Comandra umbellata
subsp. *umbellata*



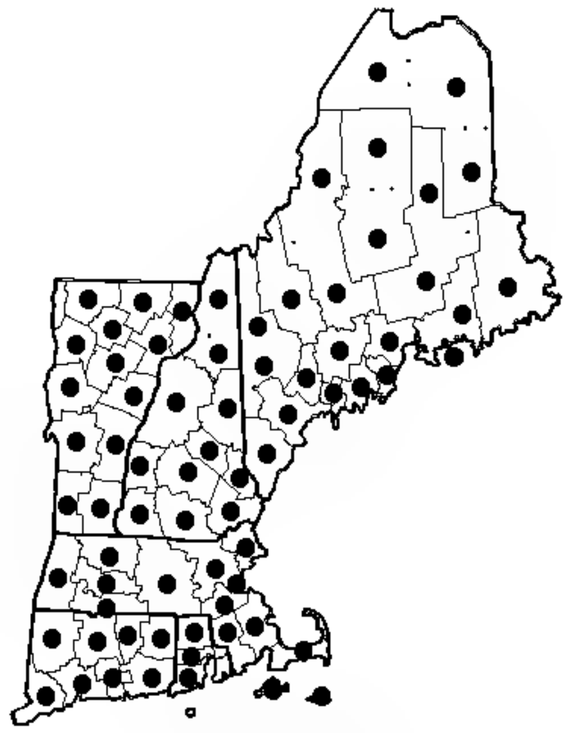
Geocaulon lividum



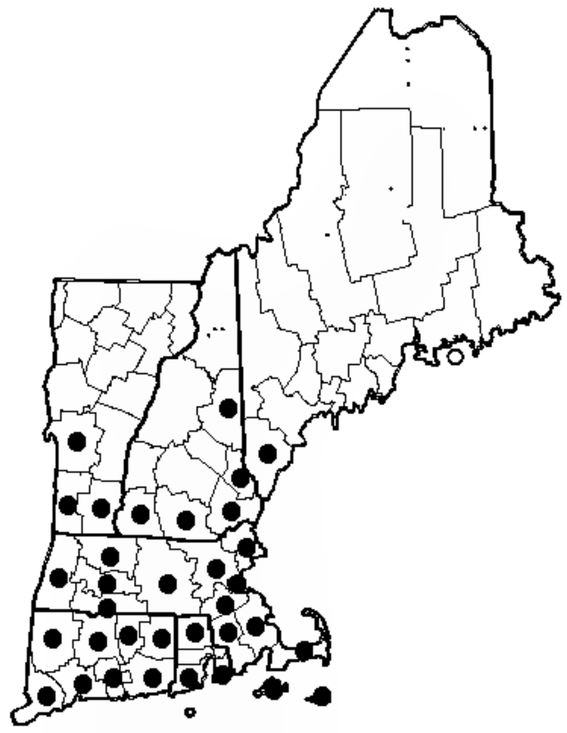
Cornus alternifolia



Cornus amomum

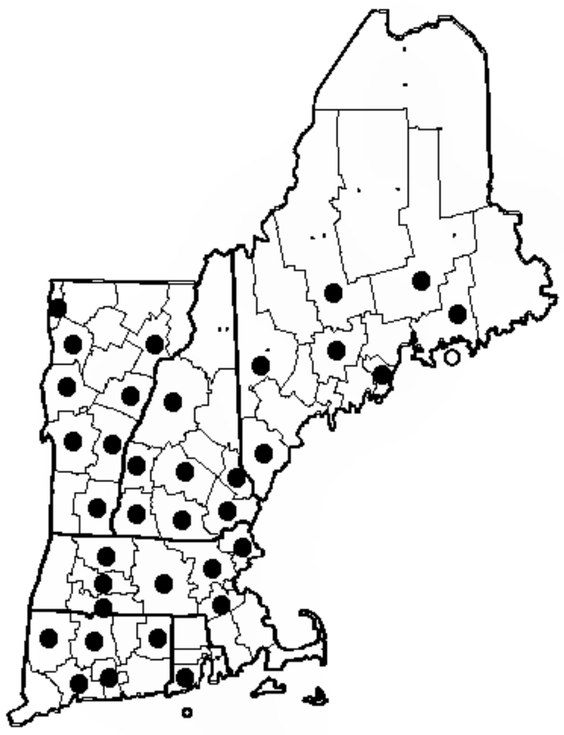


Cornus canadensis

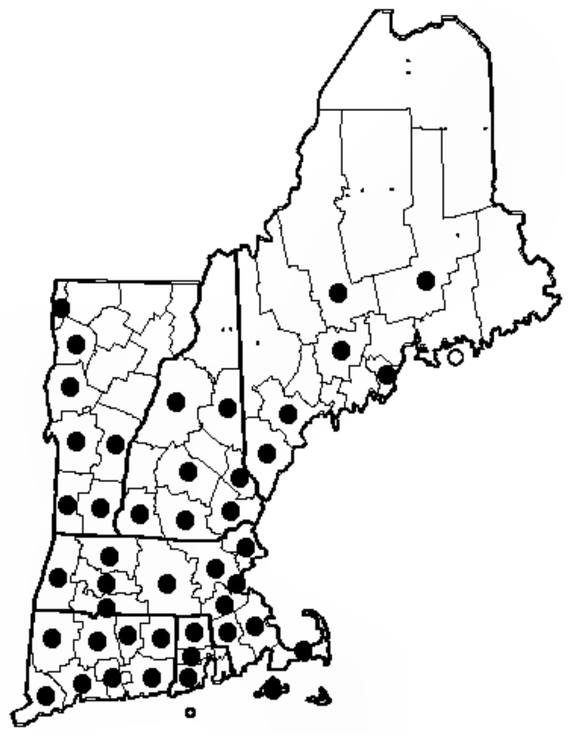


Cornus florida

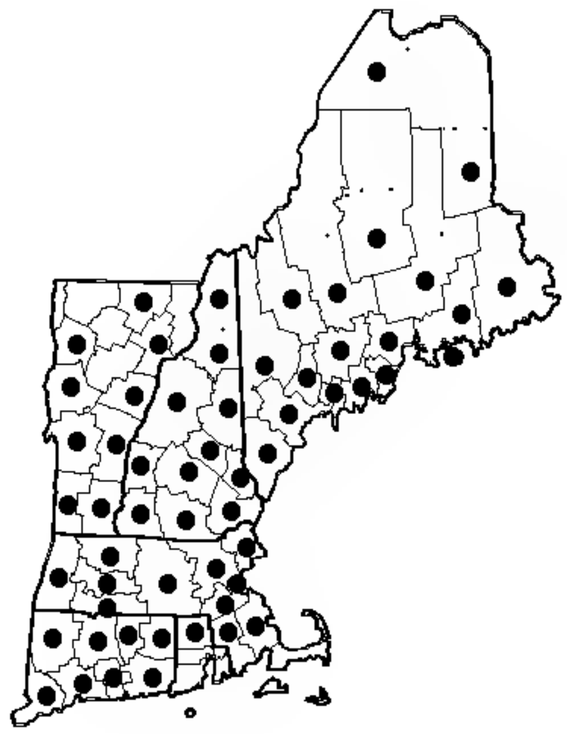
Figure 18 Distribution maps



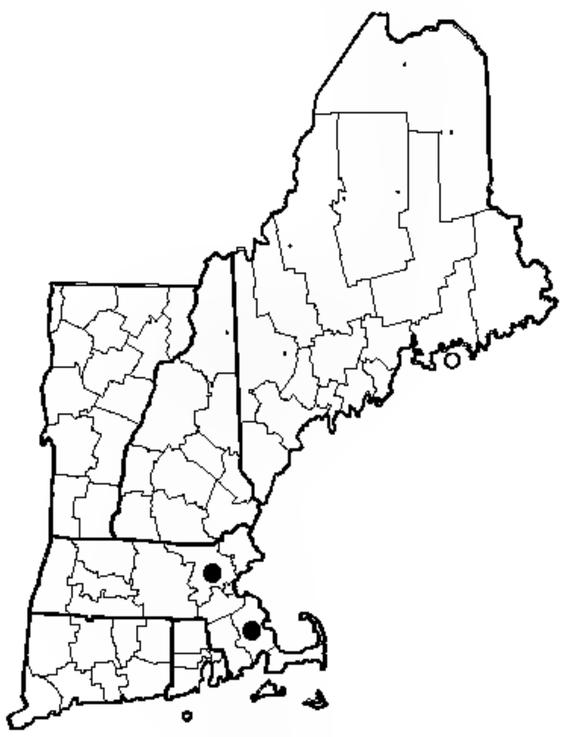
Cornus obliqua



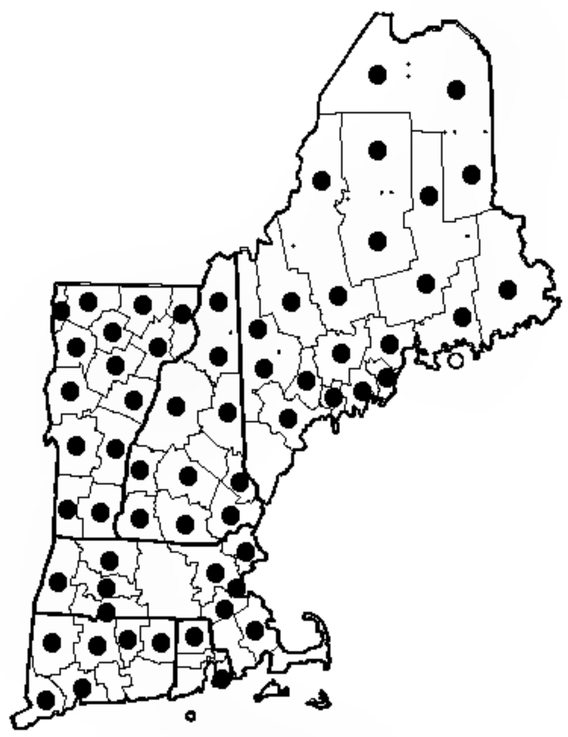
Cornus racemosa



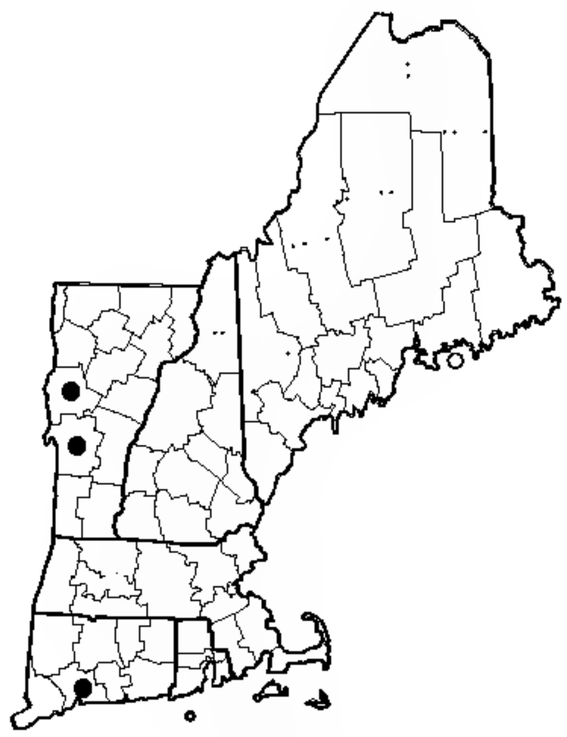
Cornus rugosa



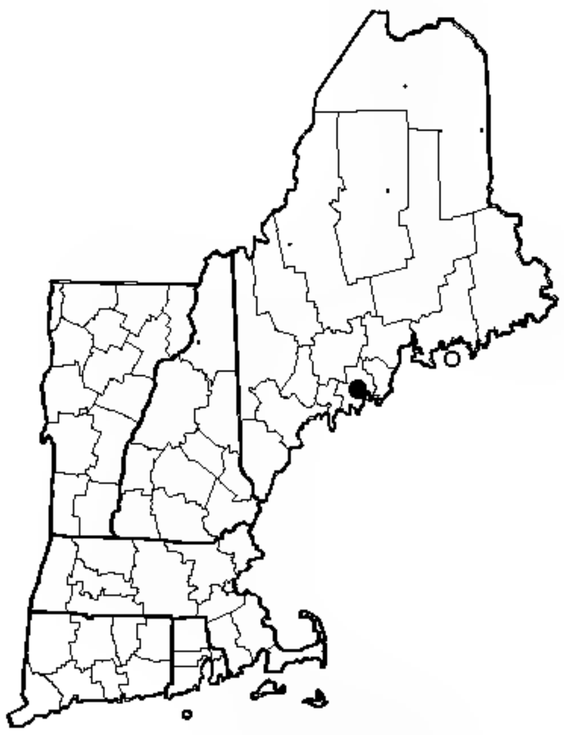
CORNUS SANGUINEA



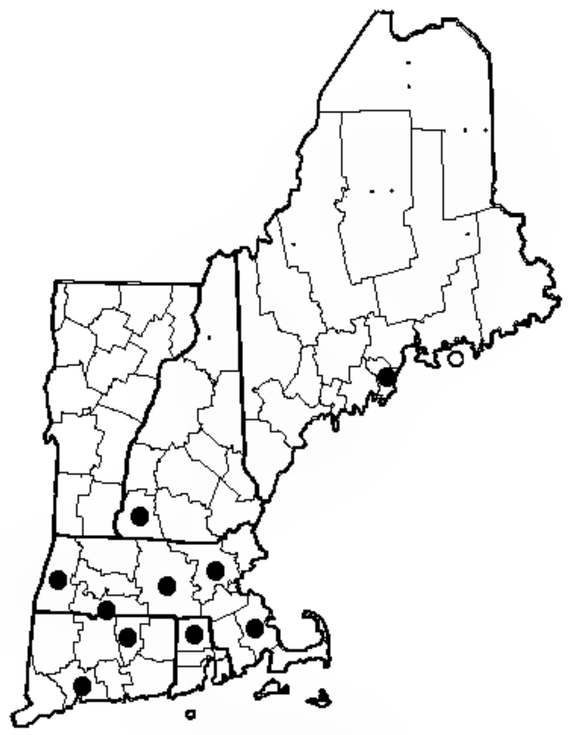
Cornus stolonifera



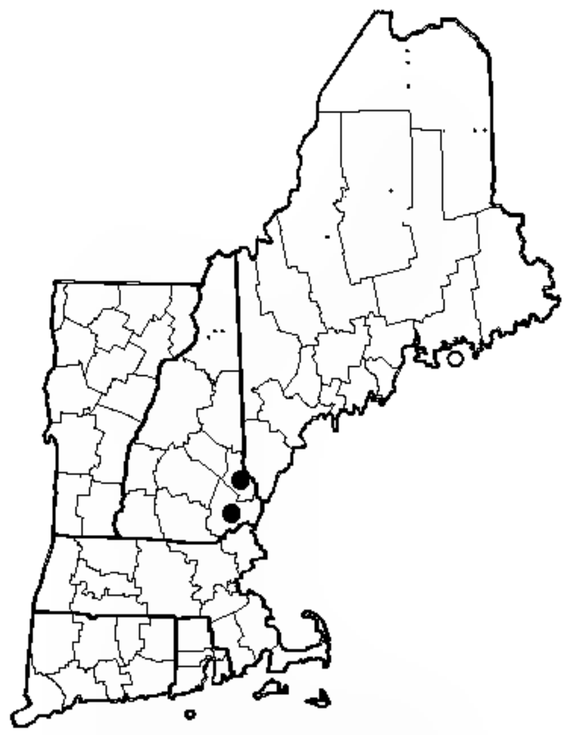
Cornus X arnoldiana



Cornus X slavinii

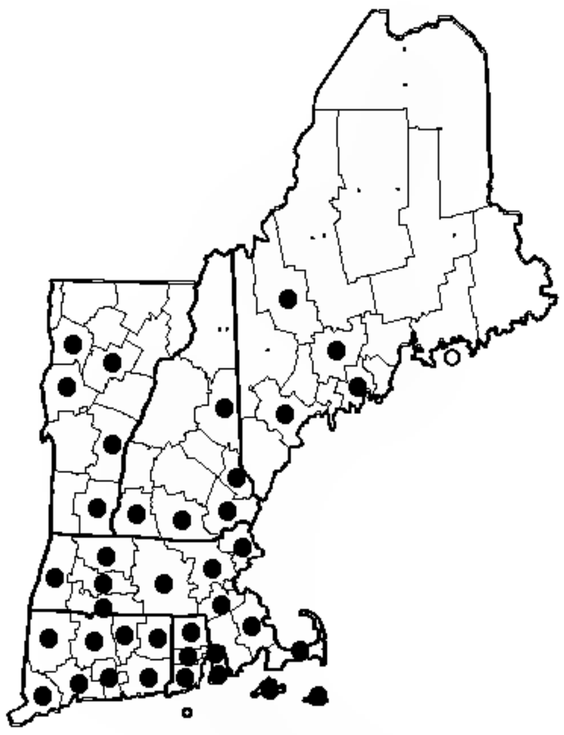


ELAEAGNUS ANGUSTIFOLIA

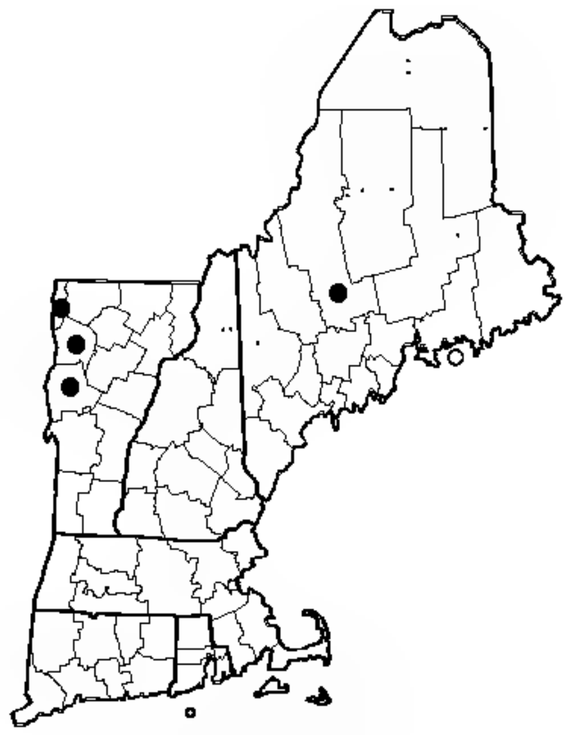


ELAEAGNUS MULTIFLORA

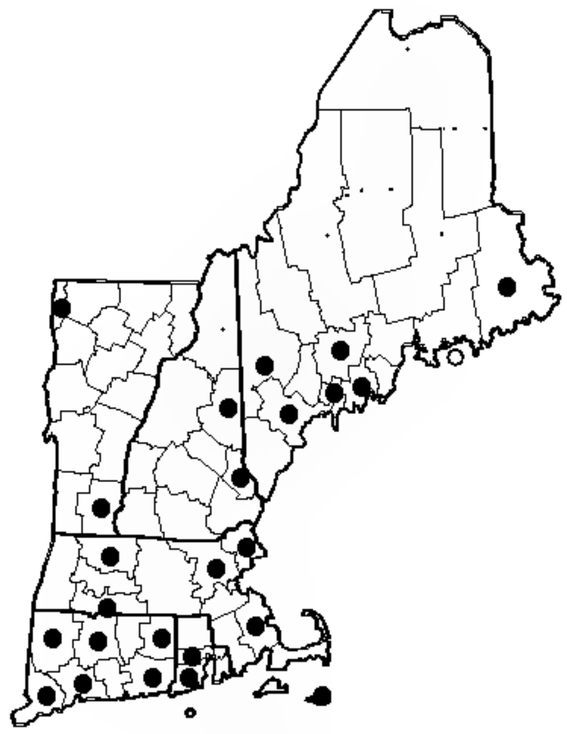
Figure 19 Distribution maps



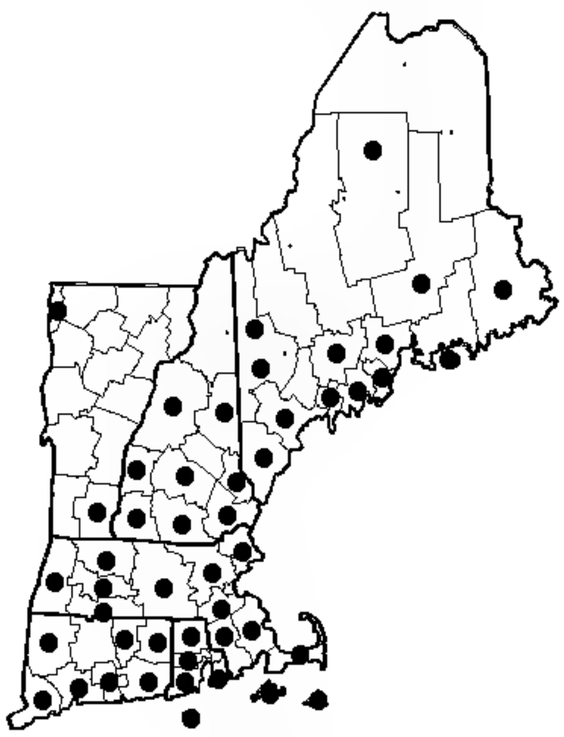
ELAEAGNUS UMBELLATA
var *PARVIFLORA*



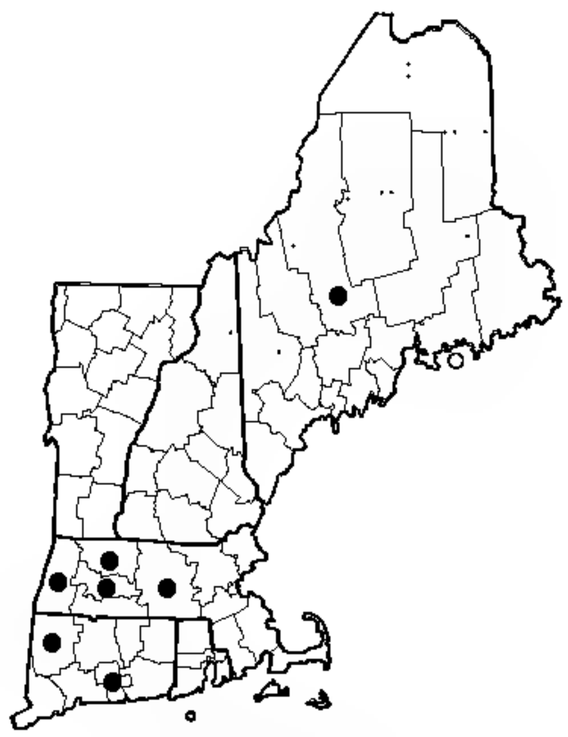
Shepherdia canadensis



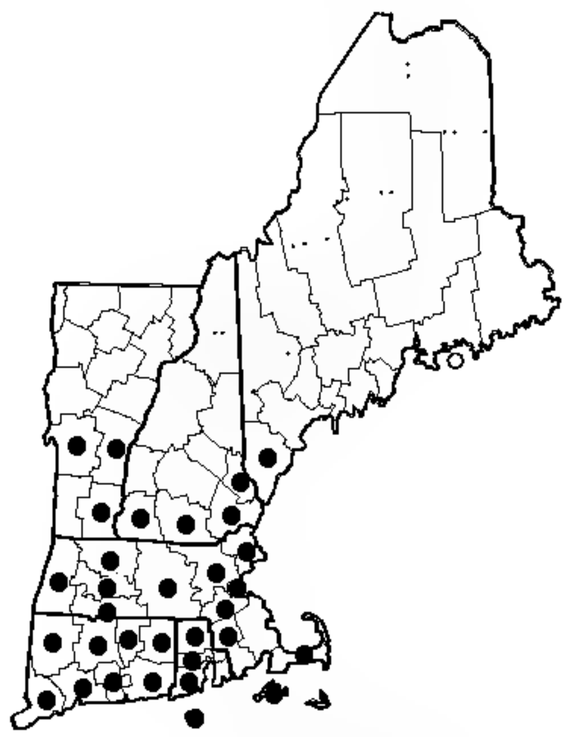
Elatine americana



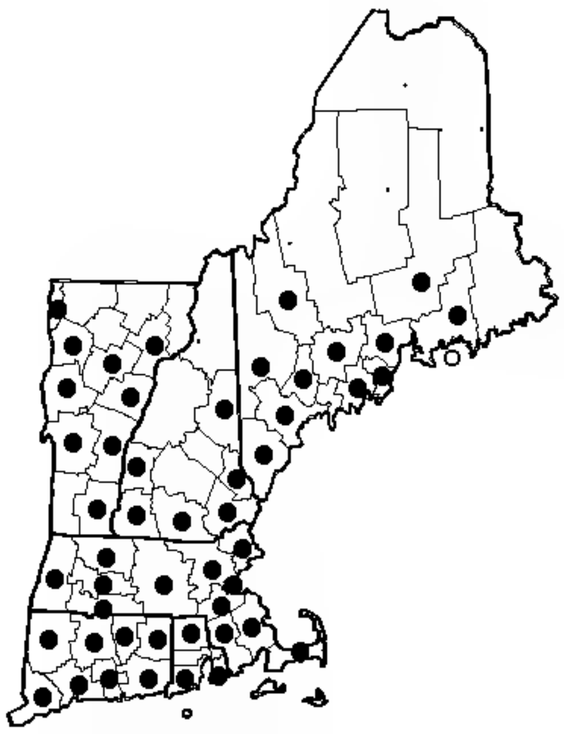
Elatine minima



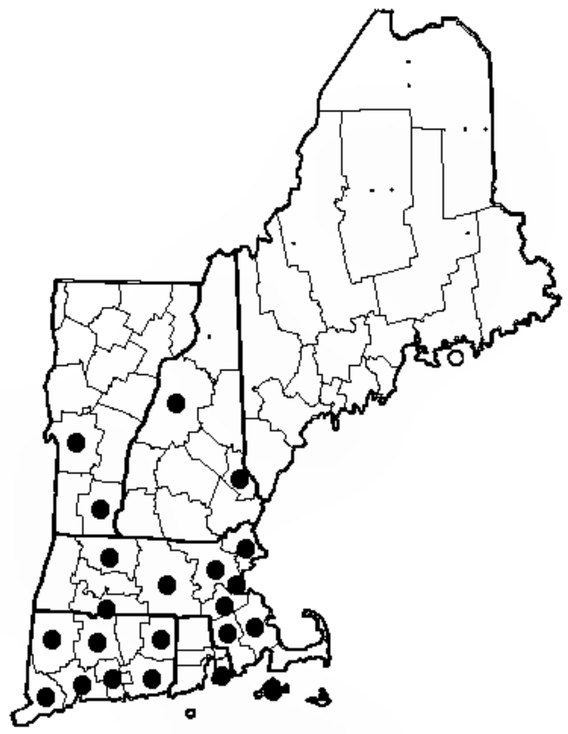
ELATINE TRIANDRA



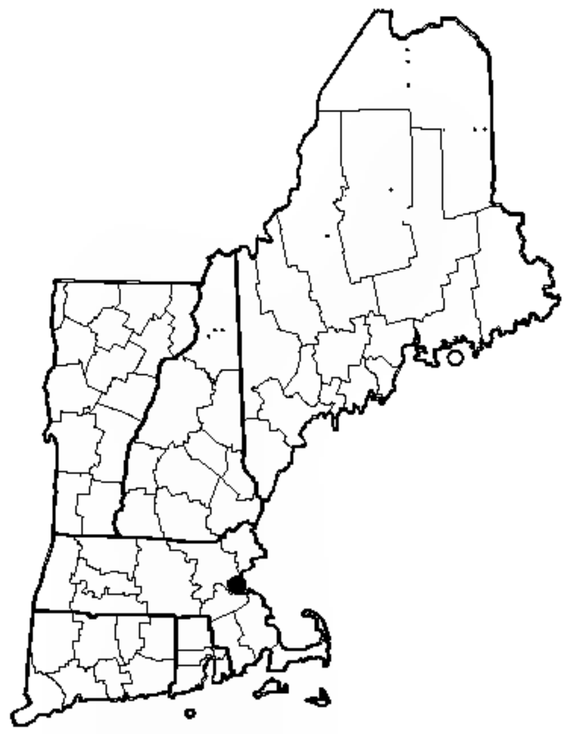
Acalypha gracilens



Acalypha rhomboidea

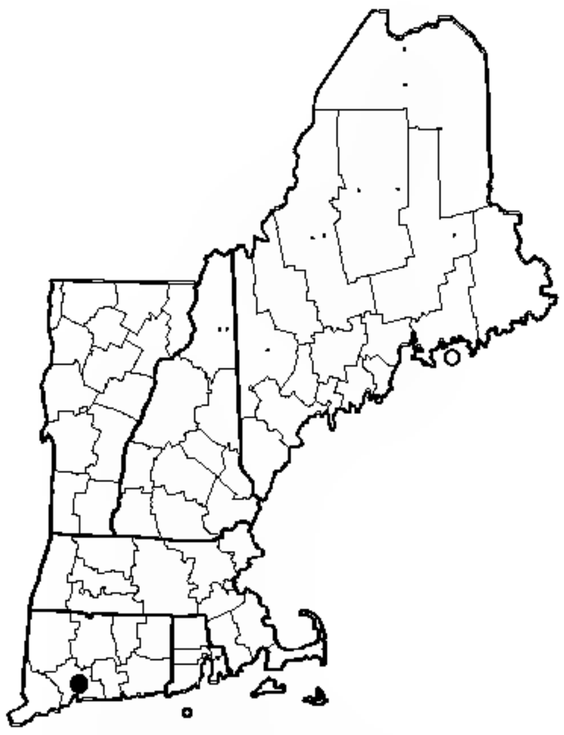


Acalypha virginica

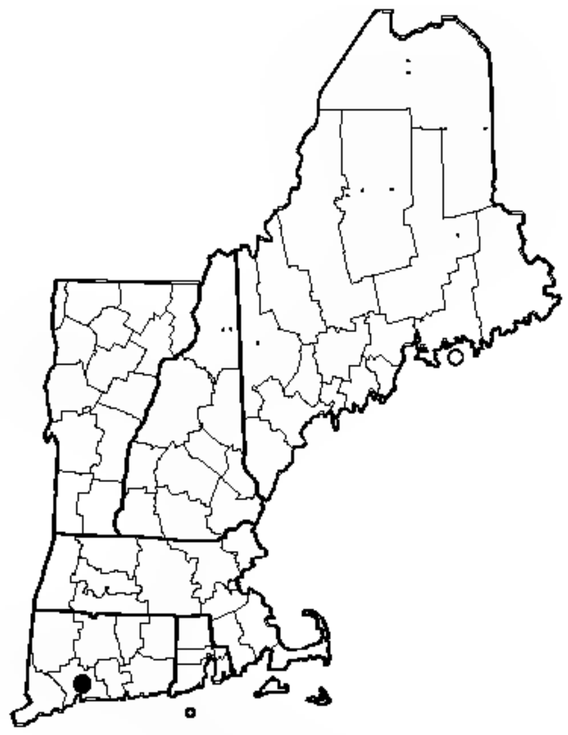


CROTON CAPITATUS

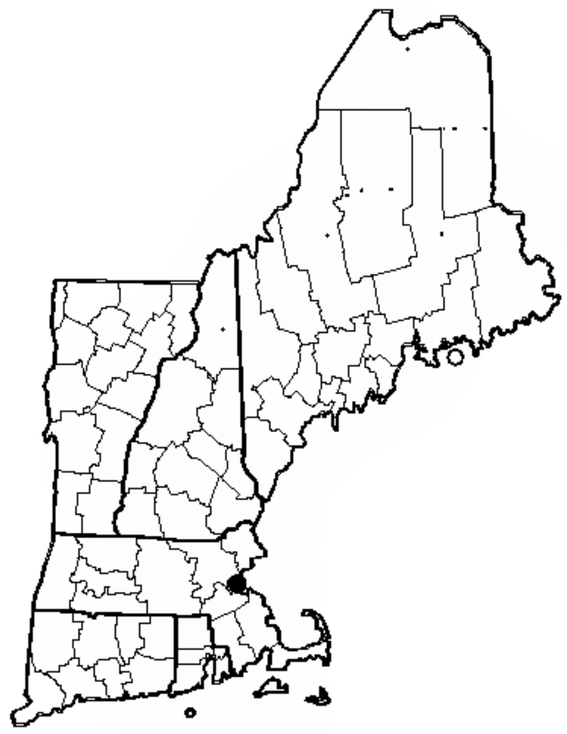
Figure 20 Distribution maps



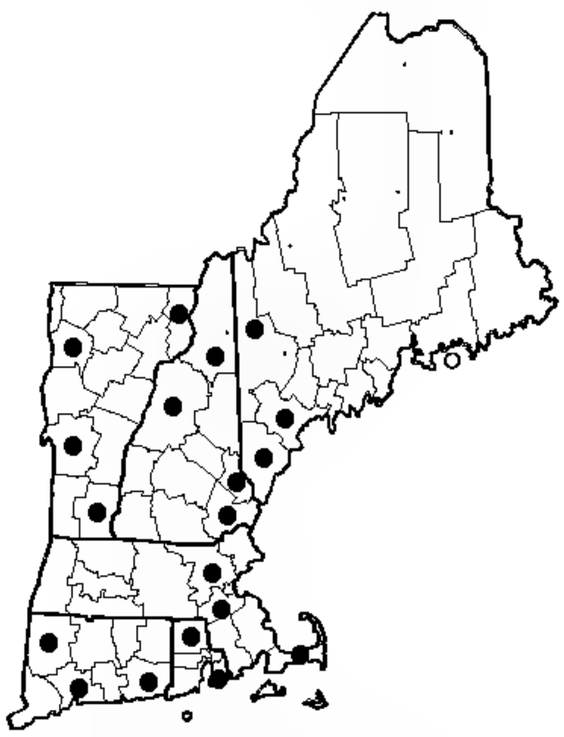
CROTON GLANDULOSUS
var *SEPTENTRIONALIS*



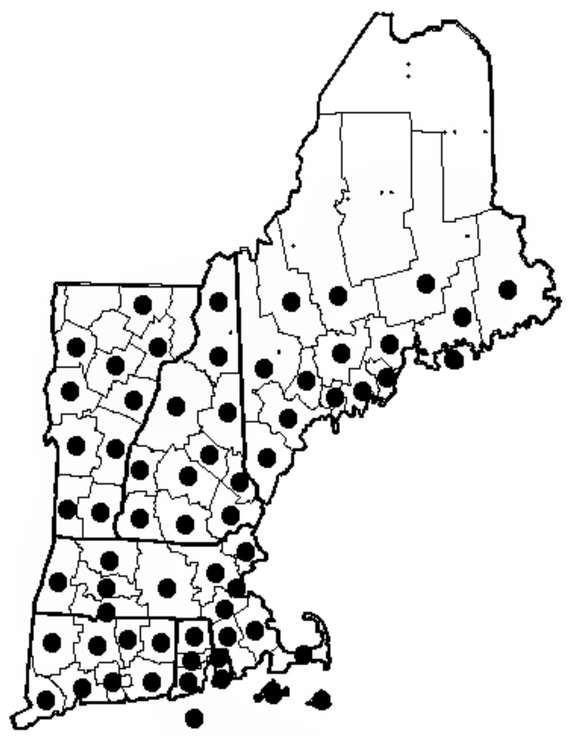
CROTON MICHAUXII
var *ELLIPTICA*



CROTON TEXENSIS



EUPHORBIA COROLLATA



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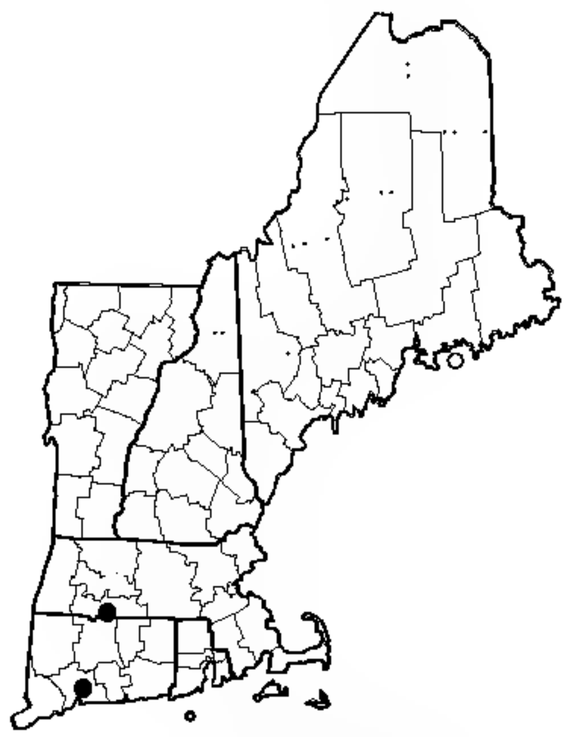
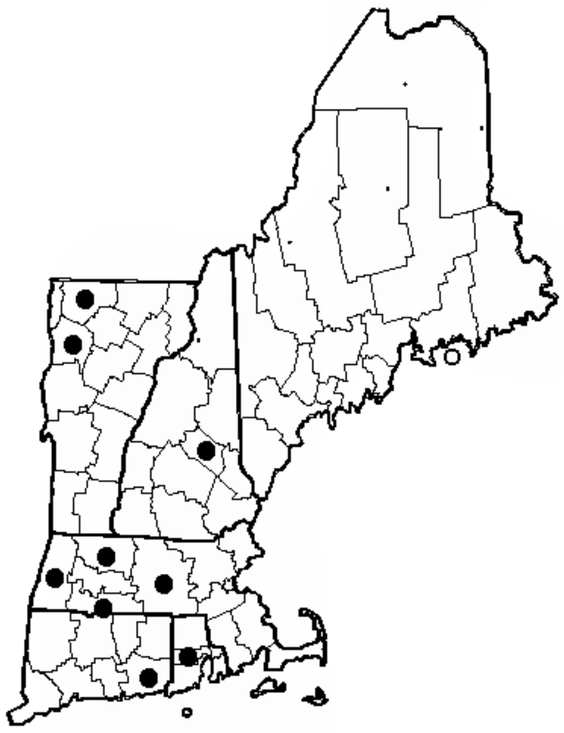
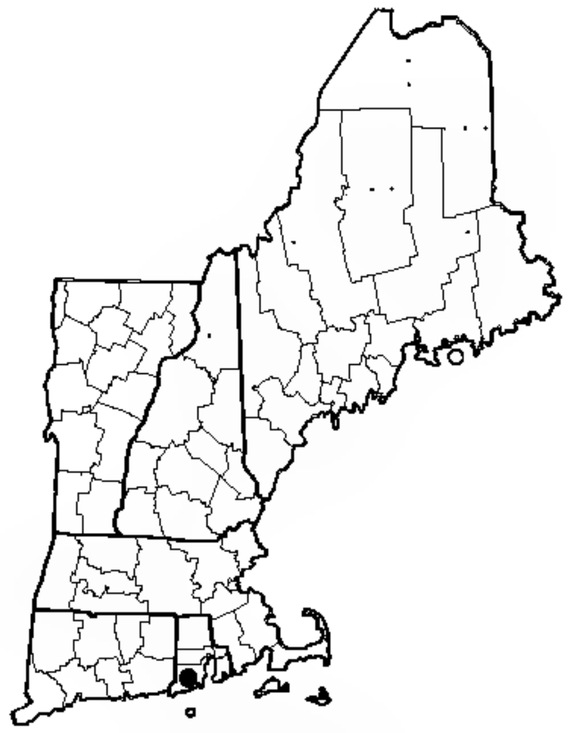


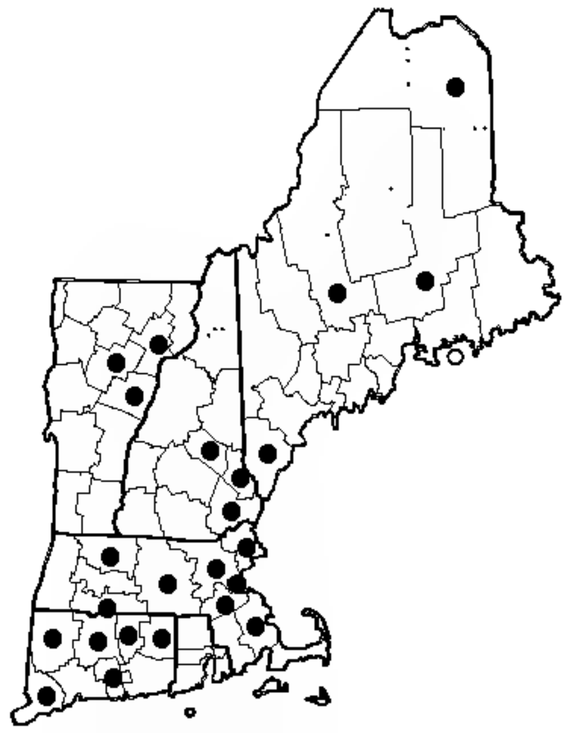
EUPHORBIA DAVIDII



EUPHORBIA DENTATA

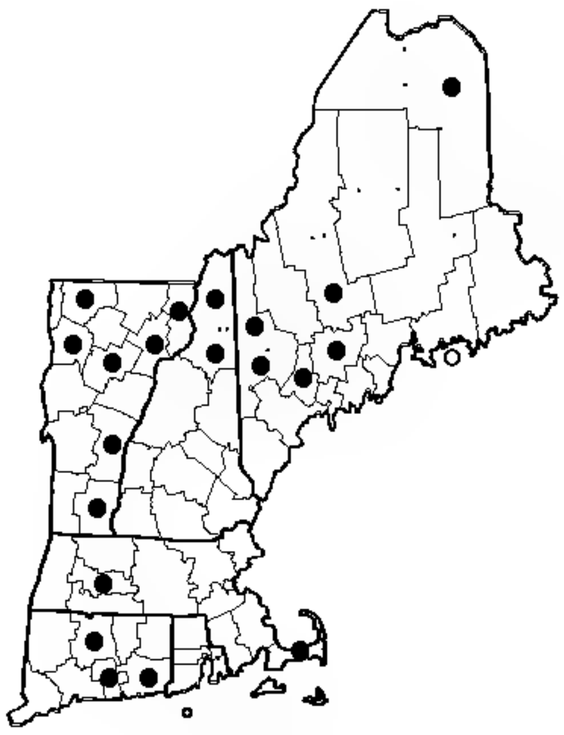


EUPHORBIA DUICIS

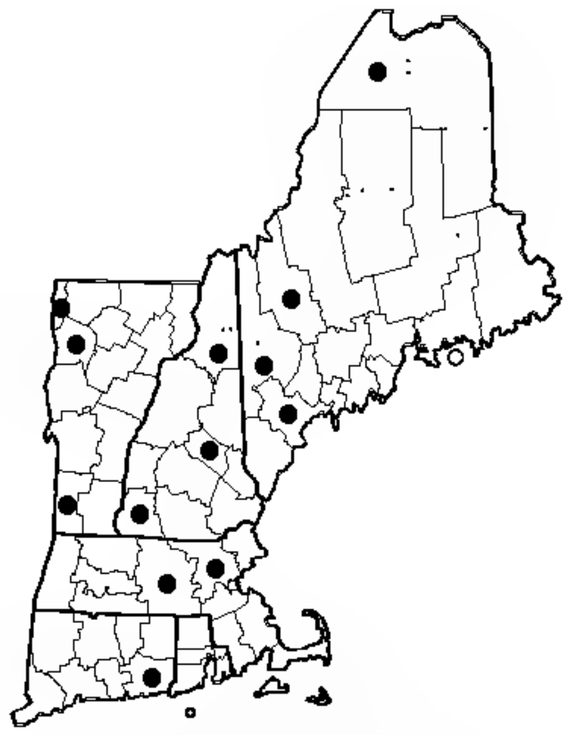


EUPHORBIA ESULA

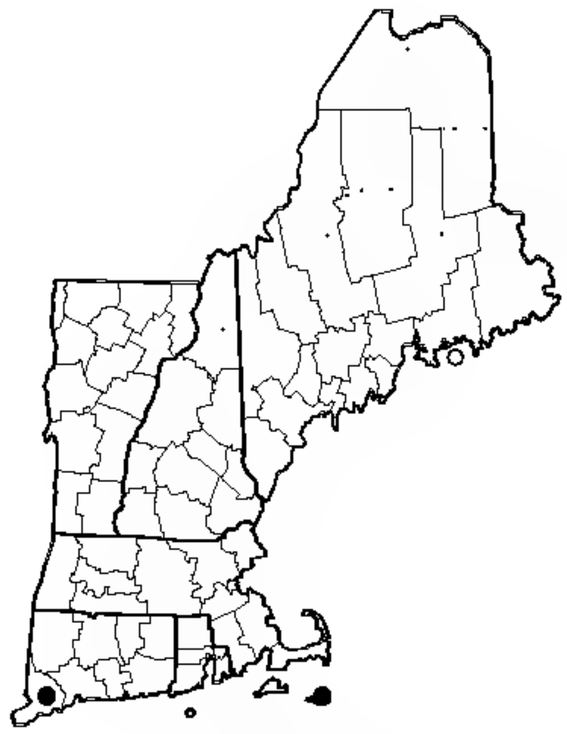
Figure 21 Distribution maps



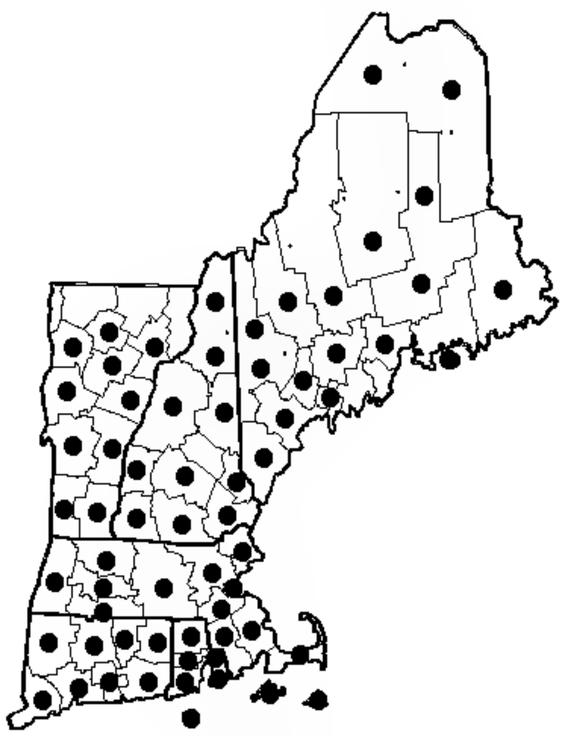
Euphorbia glyptosperma



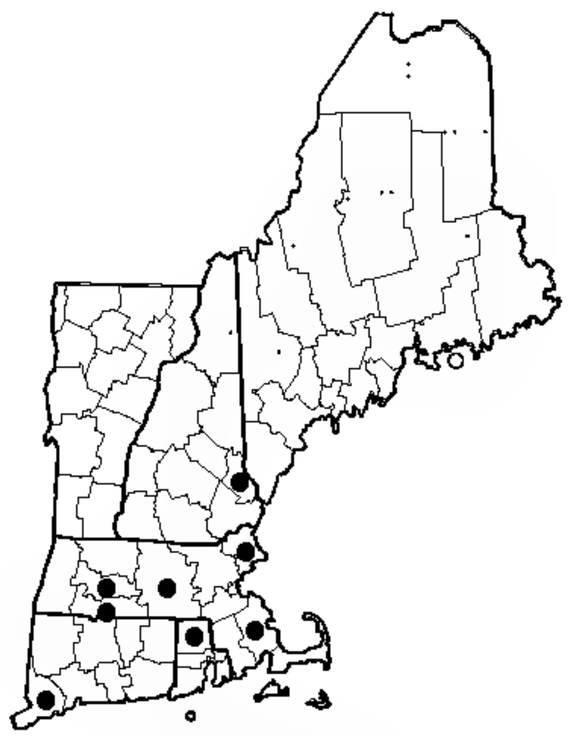
EUPHORBIA HELIOSCOPIA



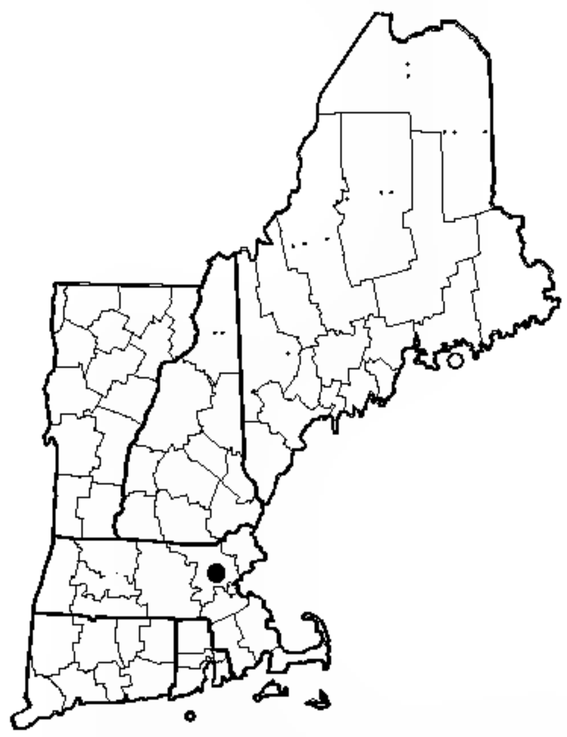
EUPHORBIA LATHYRIS



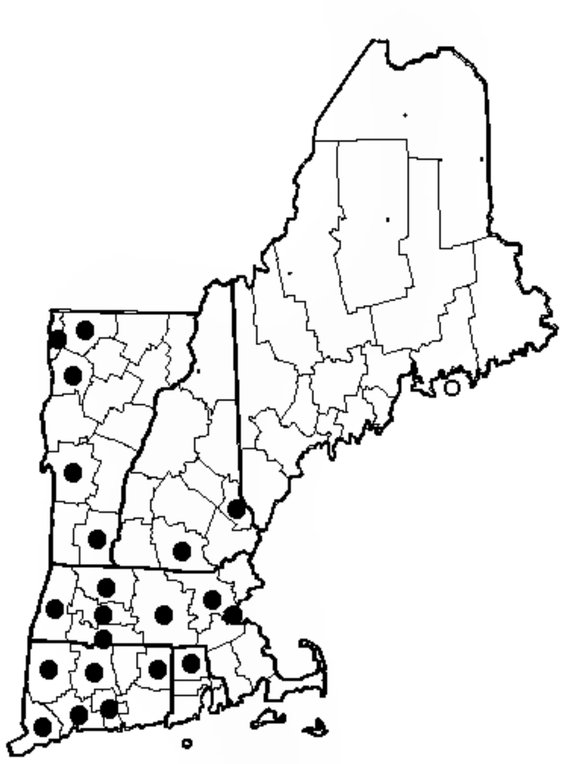
Euphorbia maculata



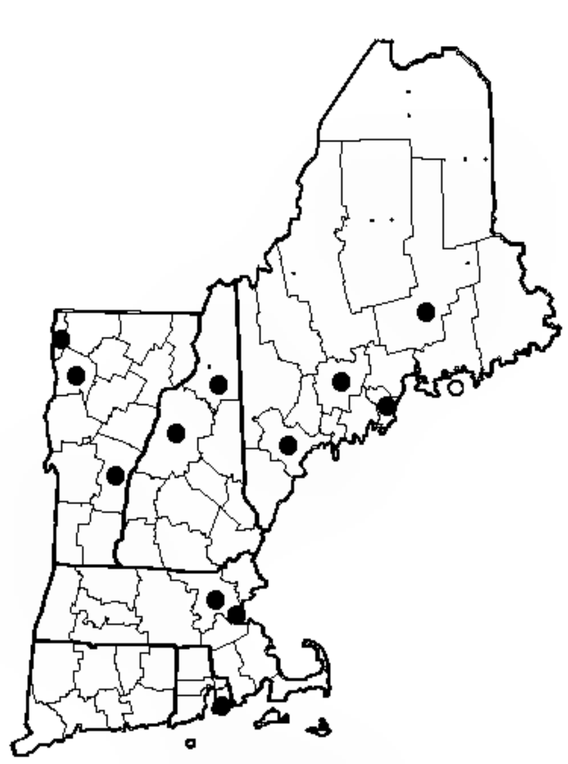
EUPHORBIA MARGINATA



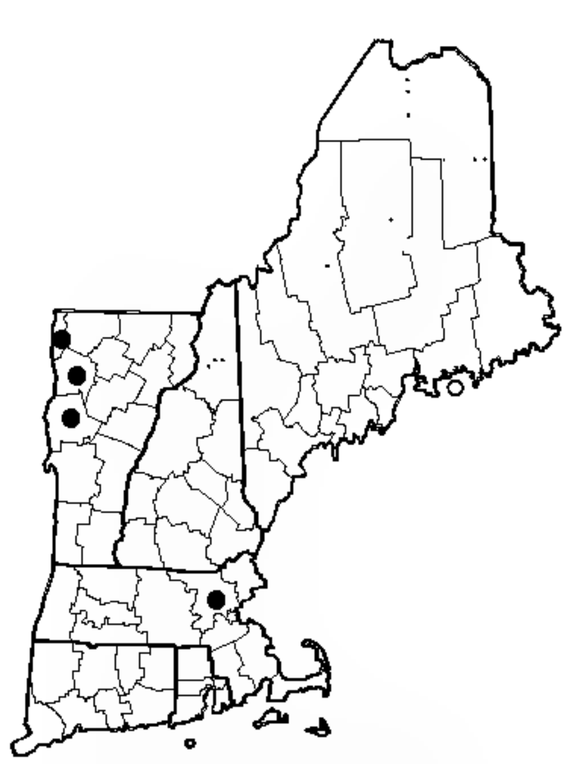
EUPHORBIA MESEMBRIANTHEMIFOLIA



Euphorbia nutans

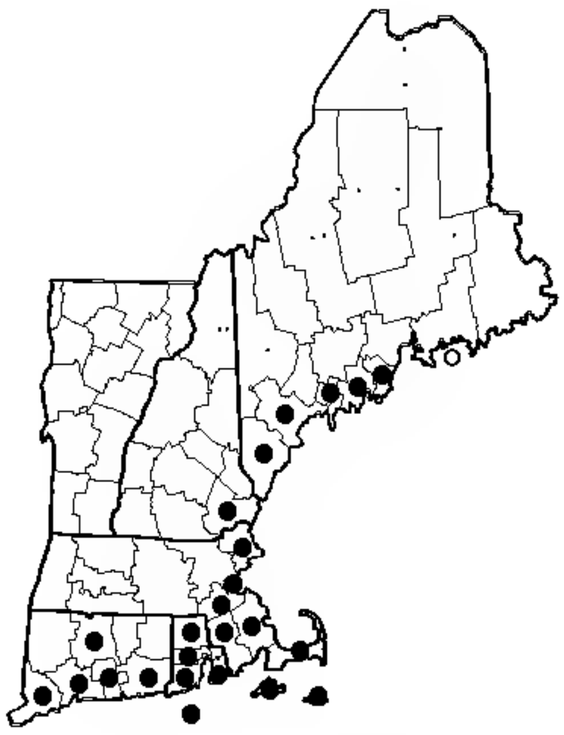


EUPHORBIA PEPLUS

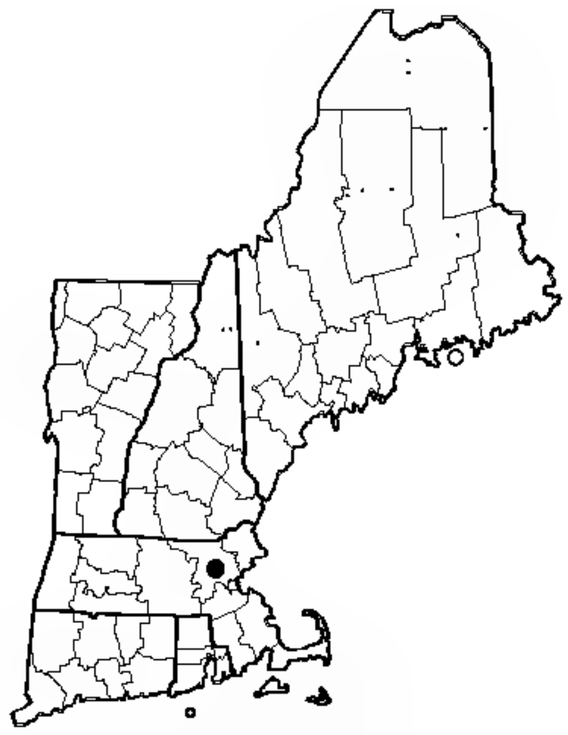


EUPHORBIA PLATYPHYLLOS

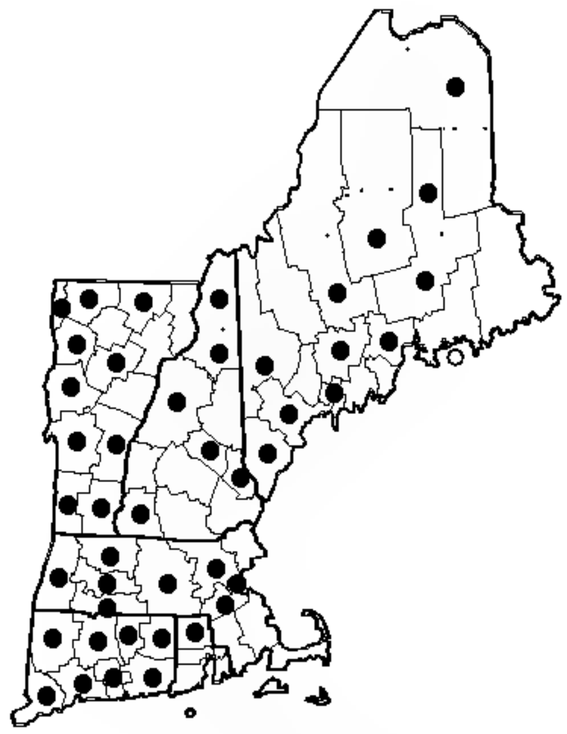
Figure 22 Distribution maps



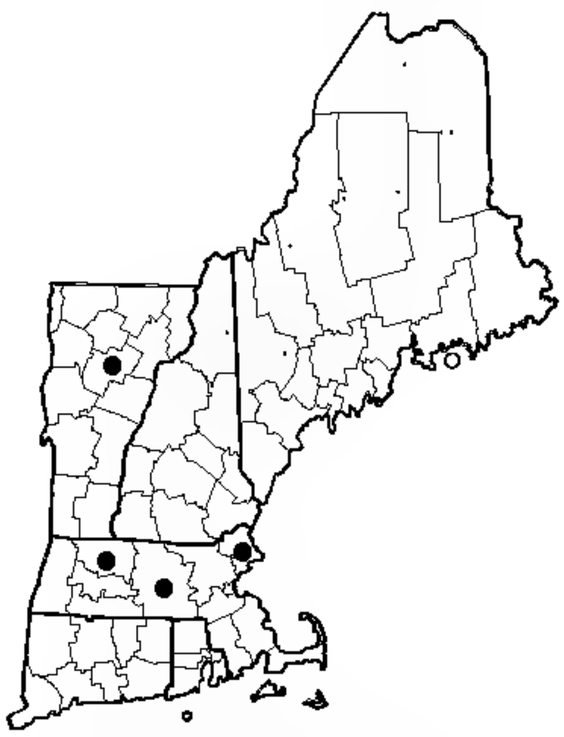
Euphorbia polygonifolia



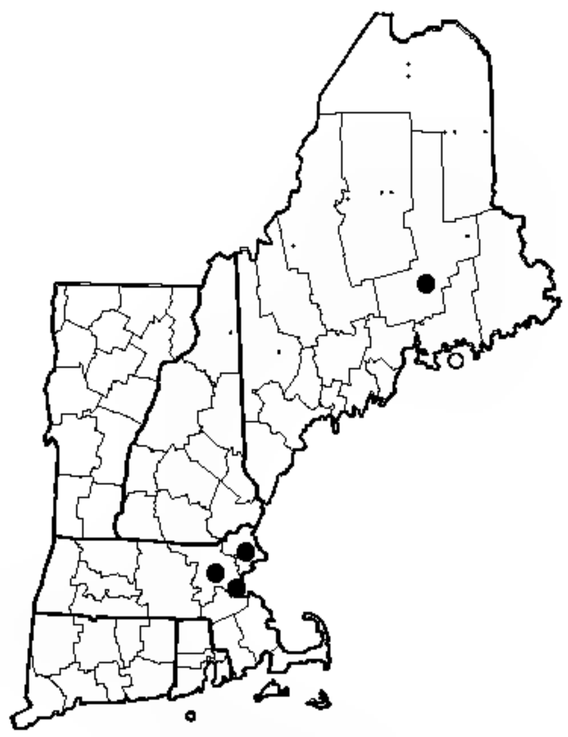
EUPHORBIA PROSTRATA



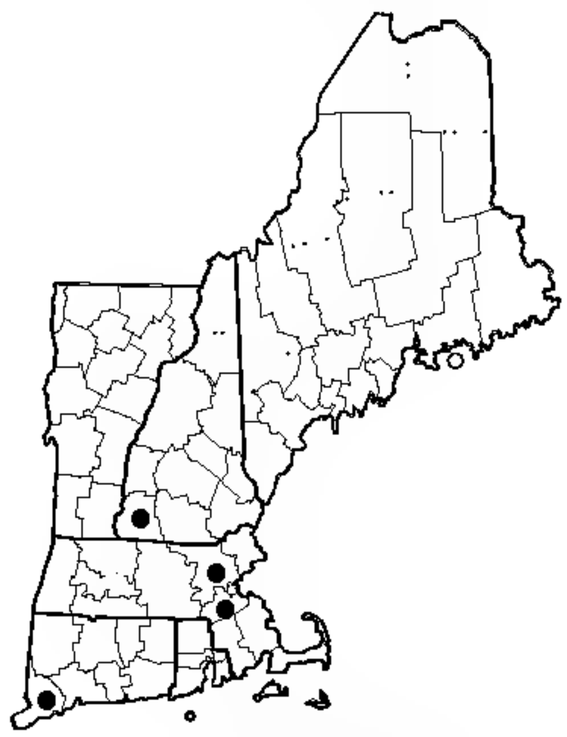
Euphorbia vermiculata



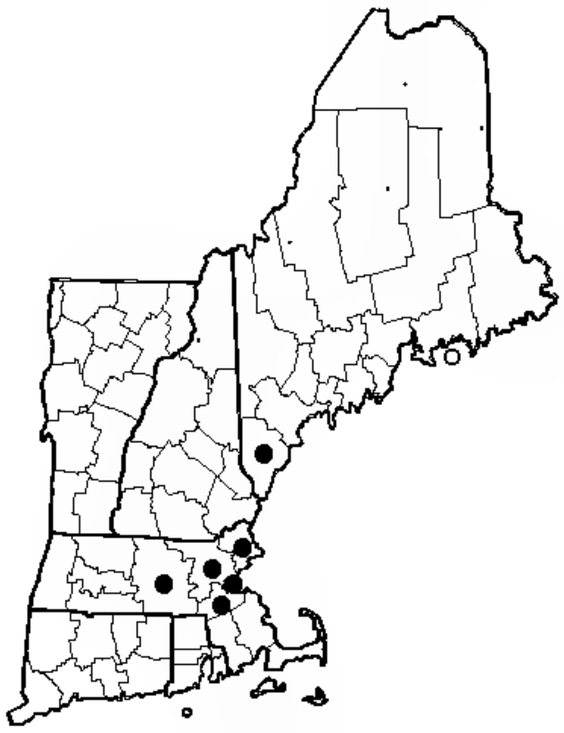
EUPHORBIA X PSEUDOESULA



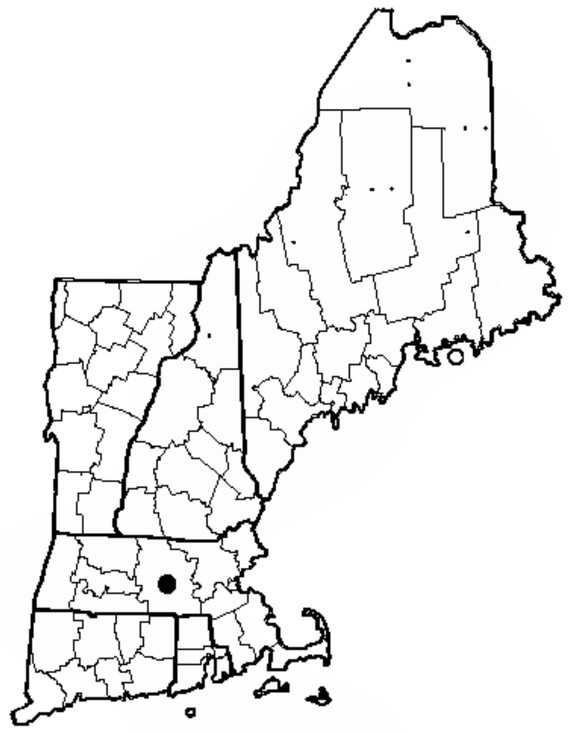
MERCURIALIS ANNUA



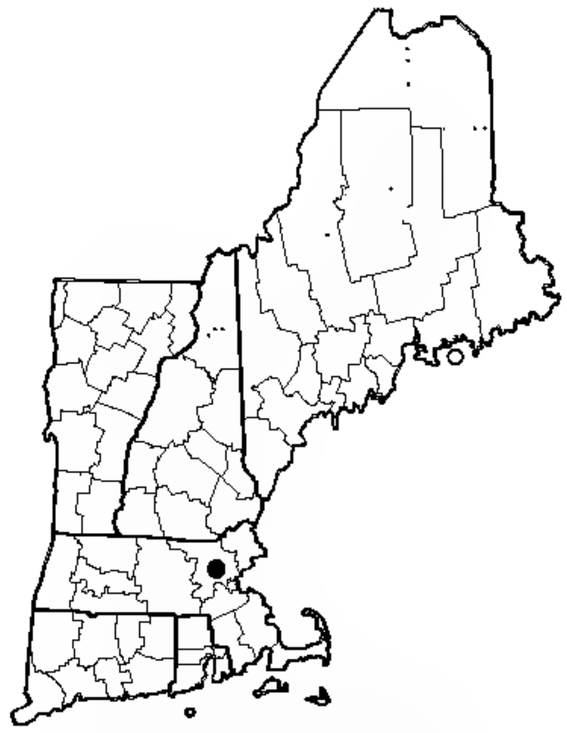
RICINUS COMMUNIS



ERODIUM BOTRYS

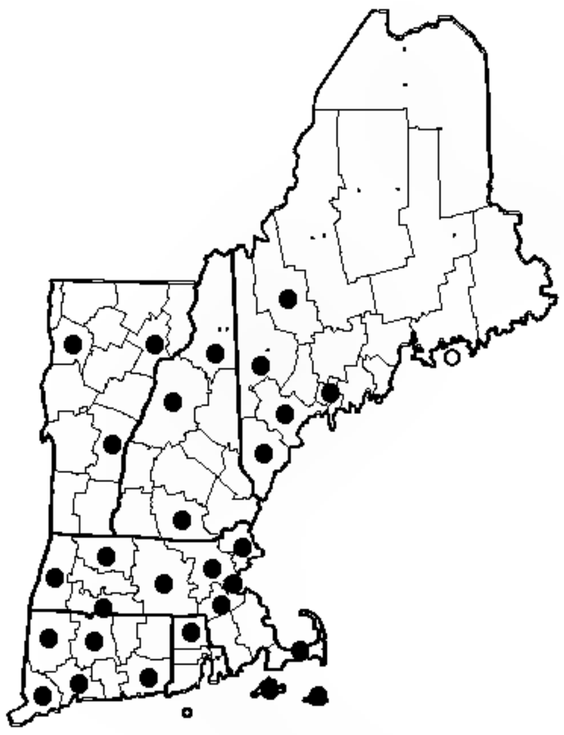


ERODIUM BRACHYCARPUM

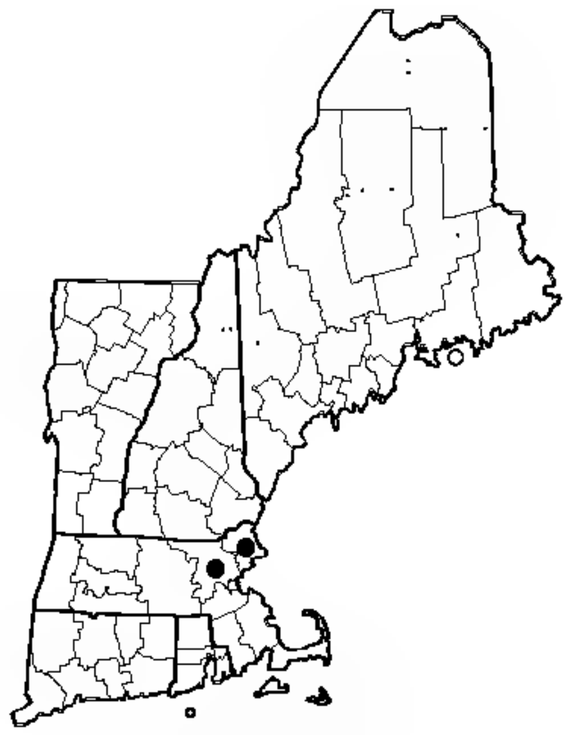


ERODIUM CICONIUM

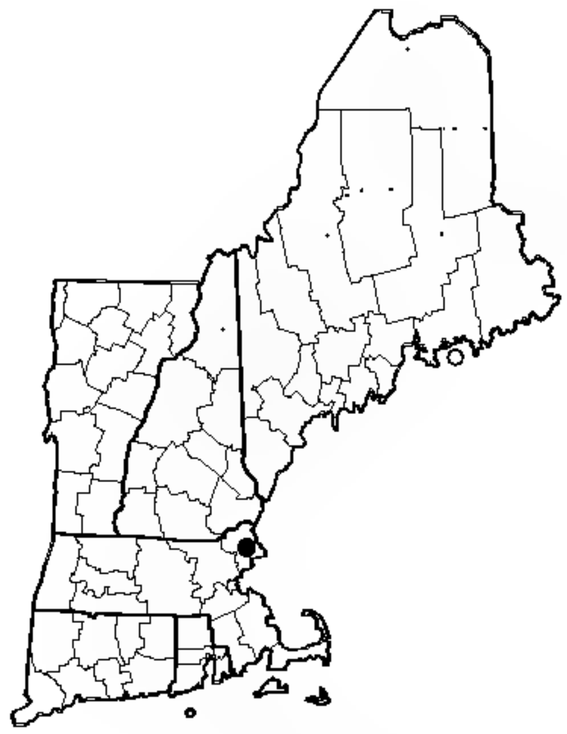
Figure 23 Distribution maps



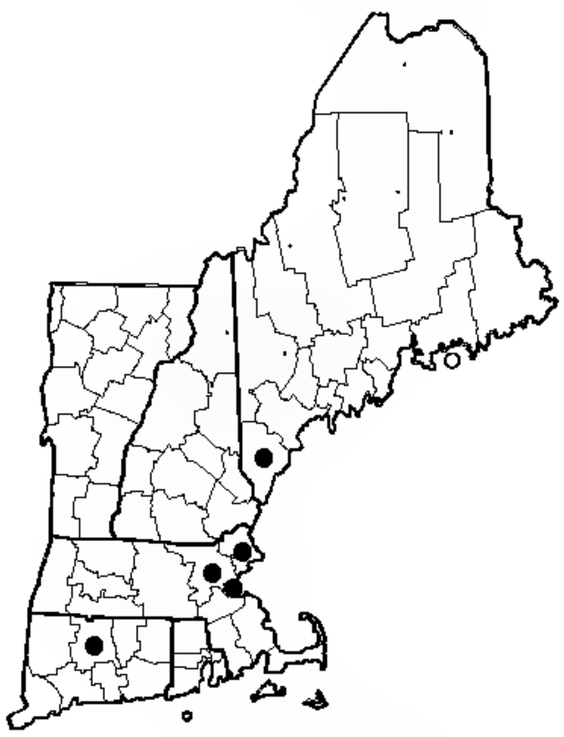
ERODIUM CICUTARIUM
subsp. *CICUTARIUM*



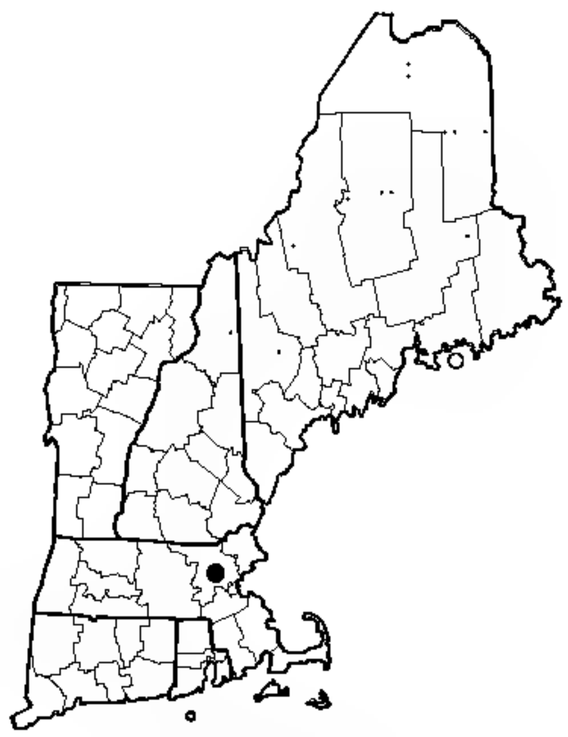
ERODIUM CYGNORUM



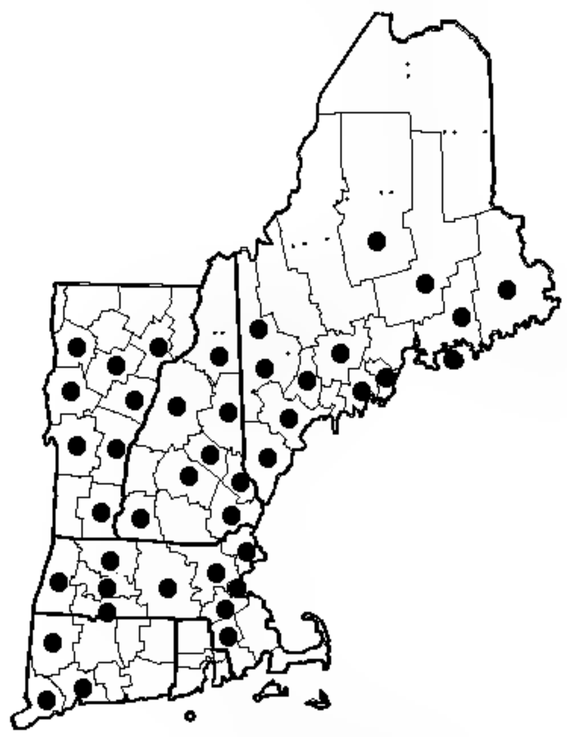
ERODIUM MALACOIDES



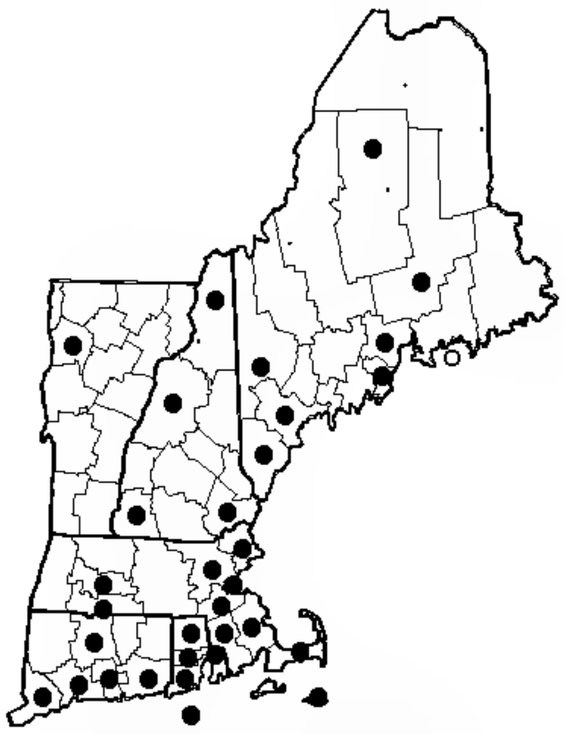
ERODIUM MOSCHATUM



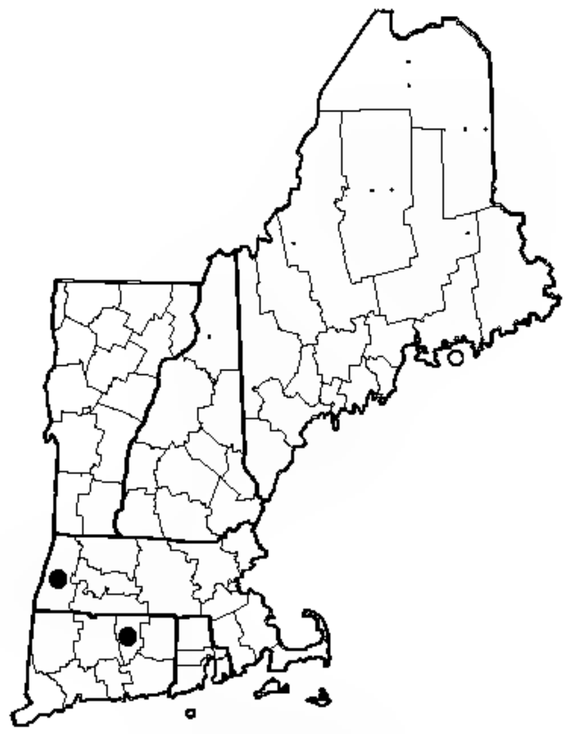
ERODIUM STEPHANIANUM



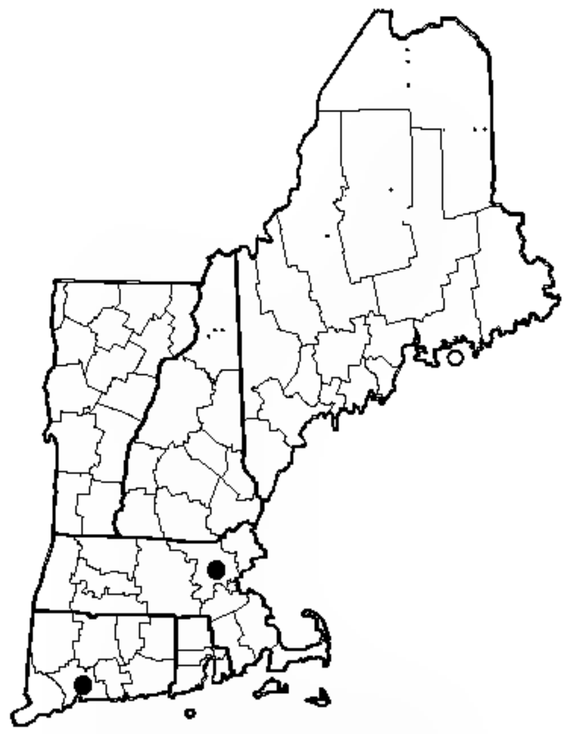
Geranium bicknellii



Geranium carolinianum
var *carolinianum*

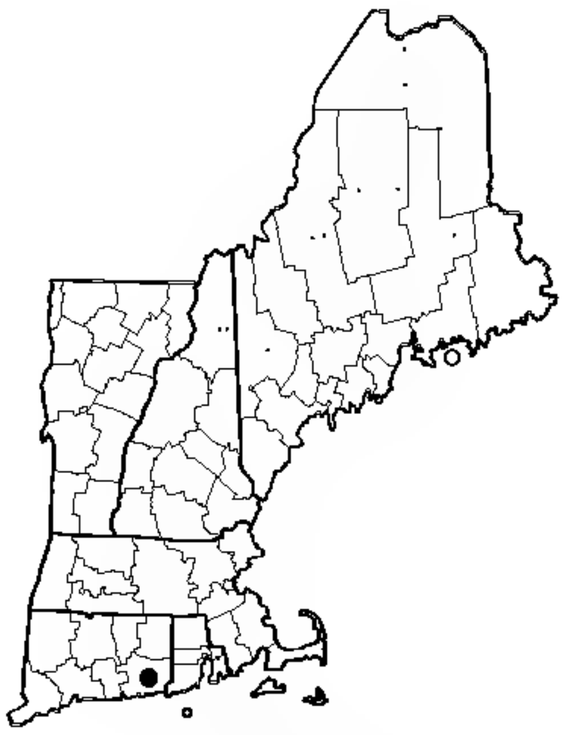


GERANIUM COLUMBINUM

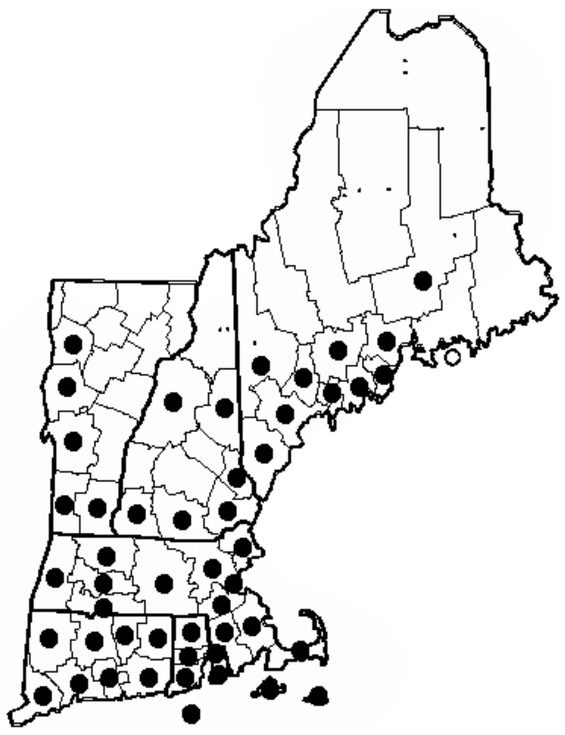


GERANIUM DISSECTUM

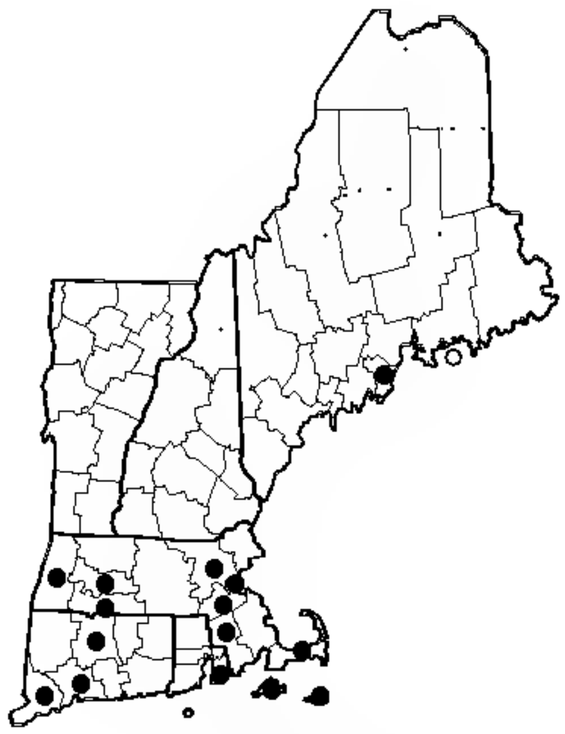
Figure 24 Distribution maps



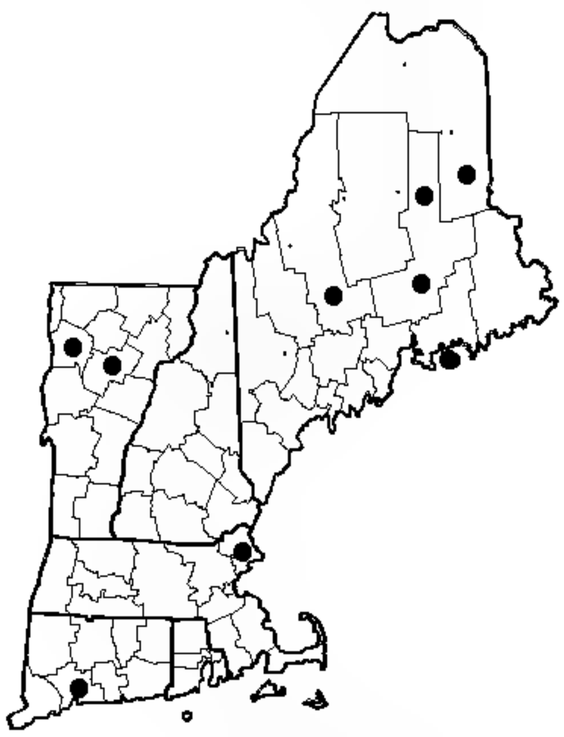
GERANIUM ERIANTHUM



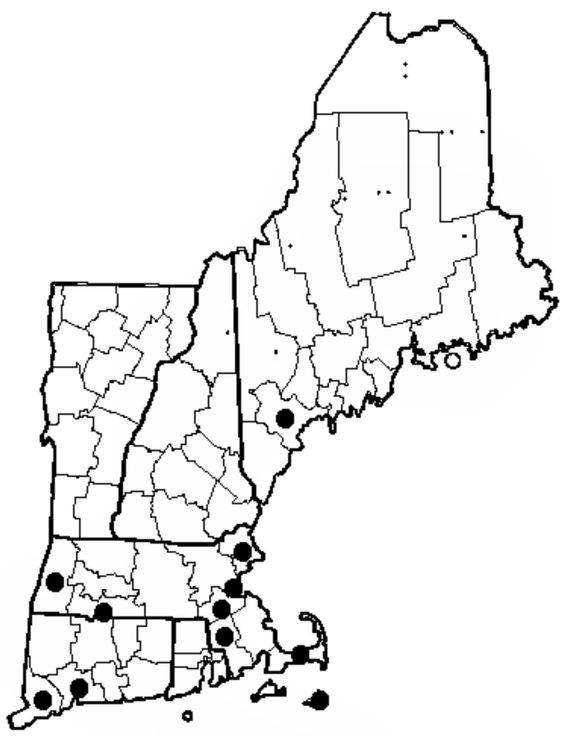
Geranium maculatum



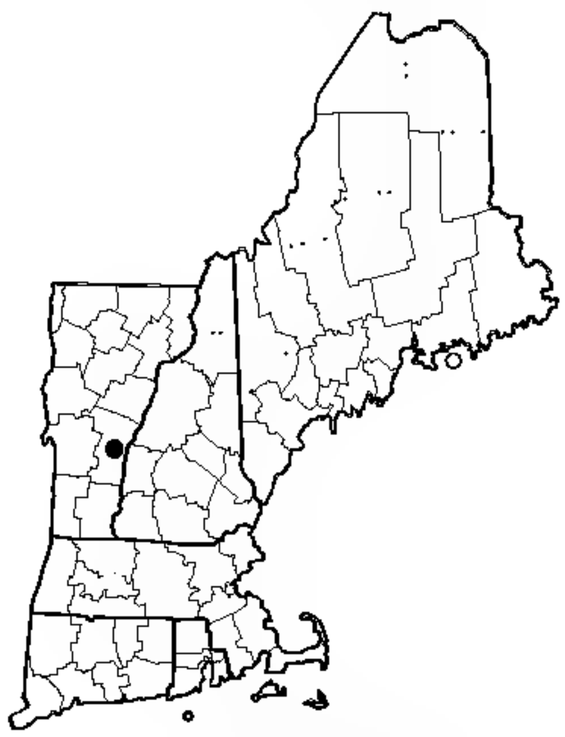
GERANIUM MOLLE



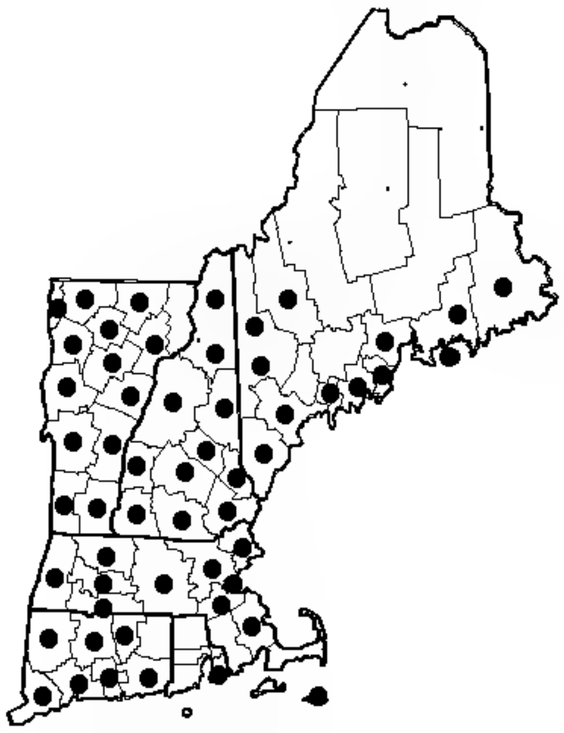
GERANIUM PRATENSE



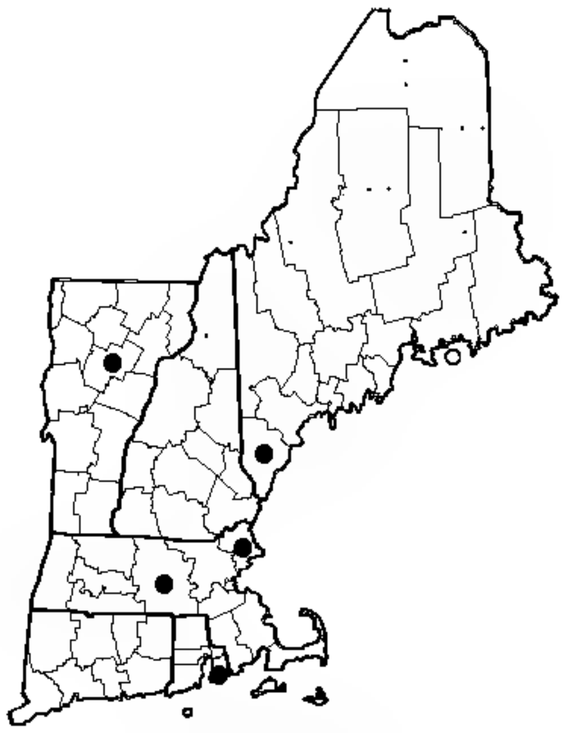
GERANIUM PUSILLUM



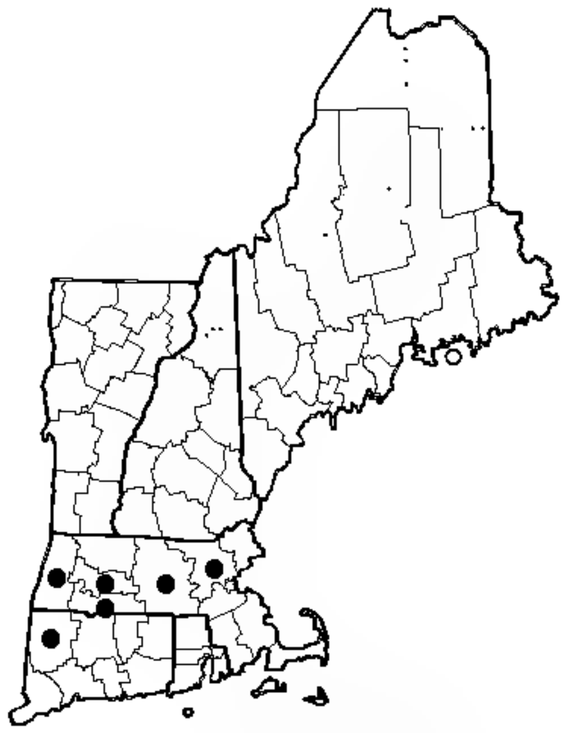
GERANIUM PYRENAICUM



Geranium robertianum

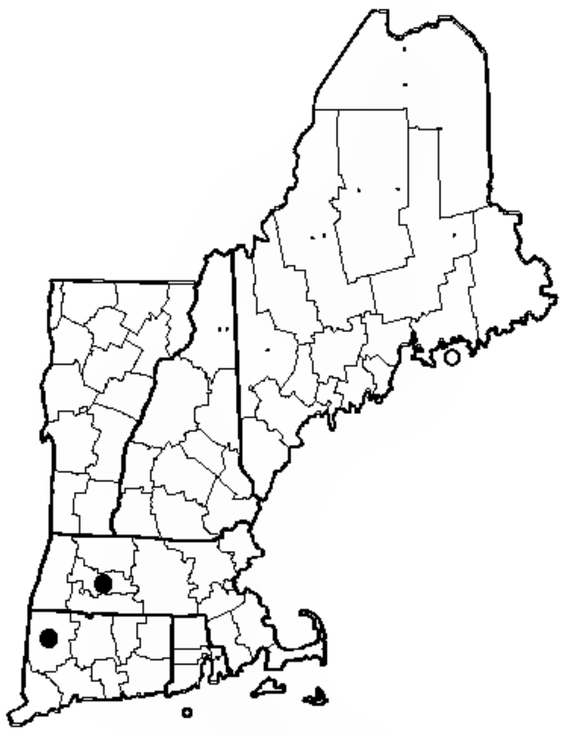


GERANIUM SANGUINEUM

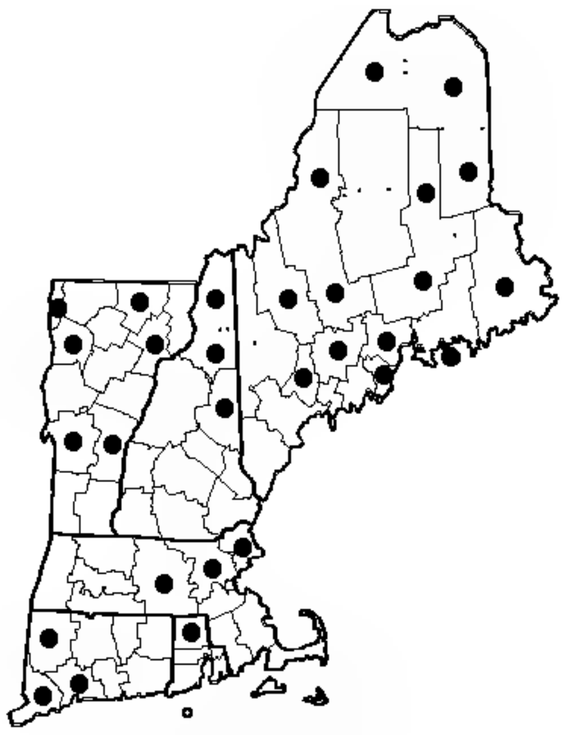


GERANIUM SIBIRICUM

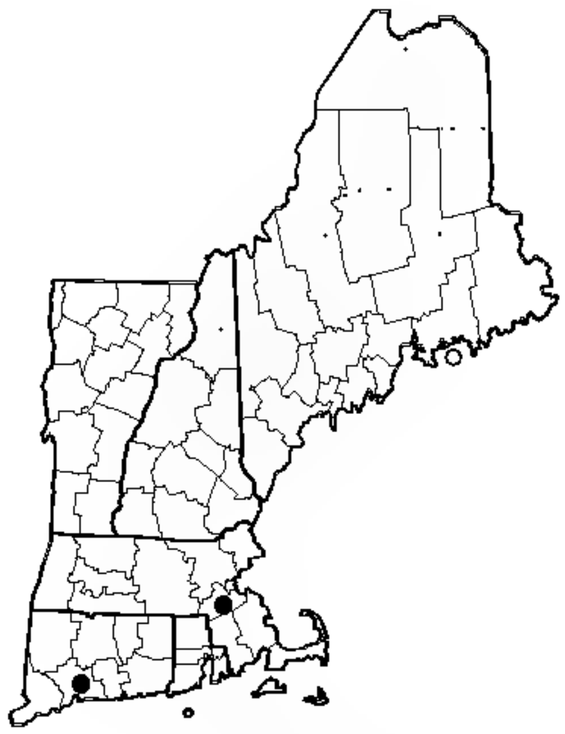
Figure 25 Distribution maps



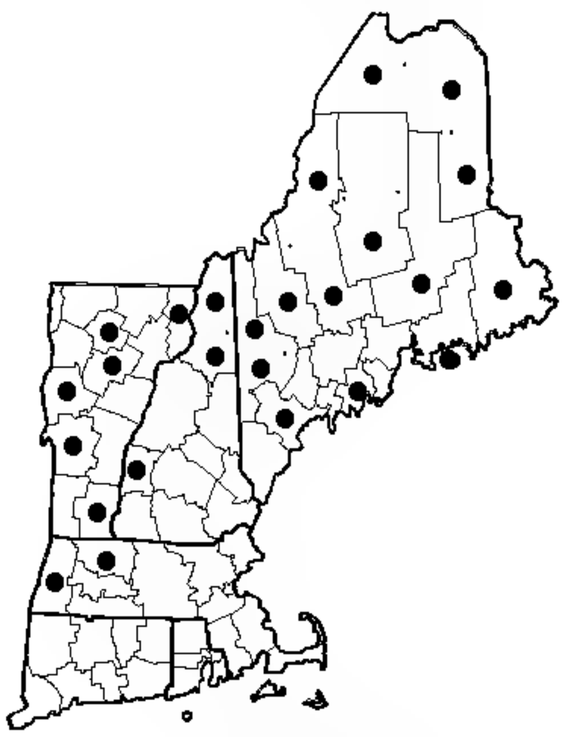
GERANIUM THUNBERGII



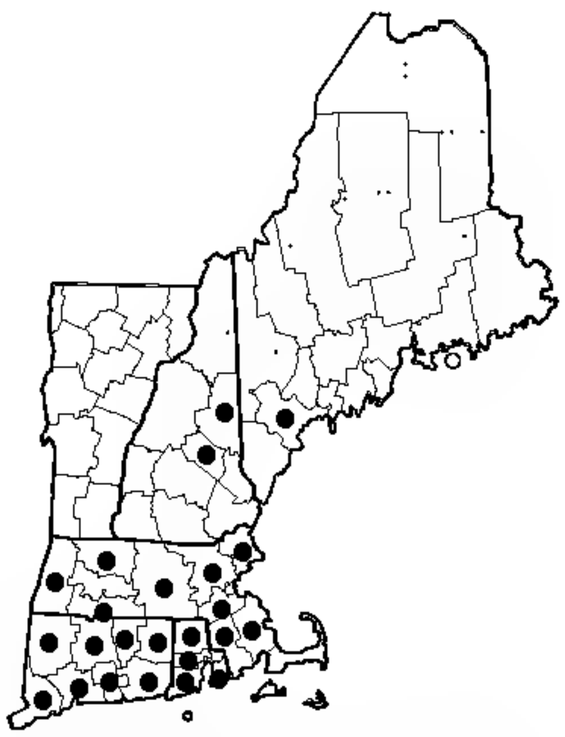
Myriophyllum alterniflorum



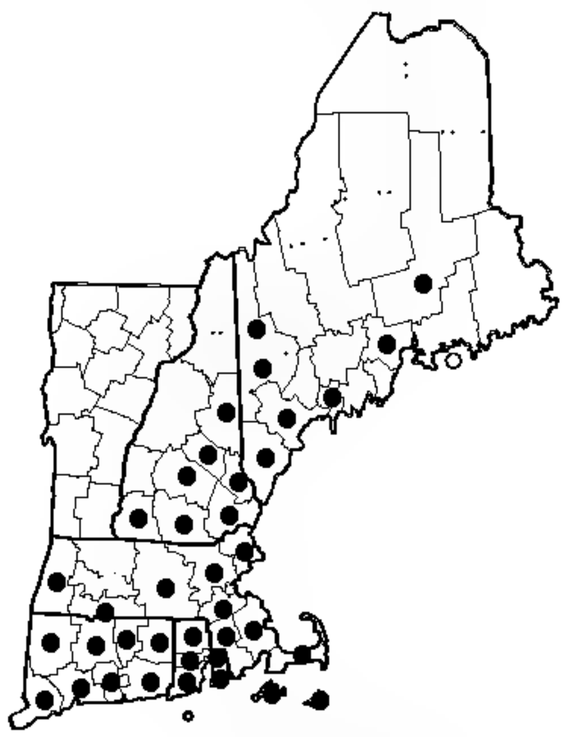
MYRIOPHYLLUM AQUATICUM



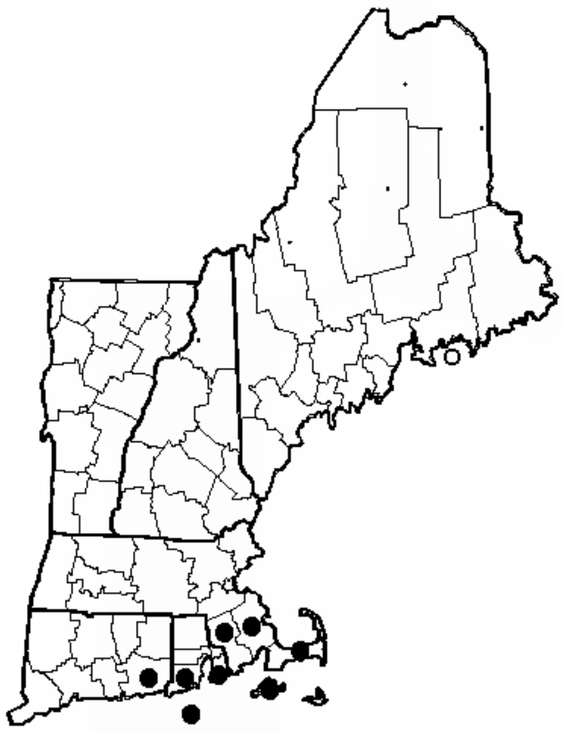
Myriophyllum farwellii



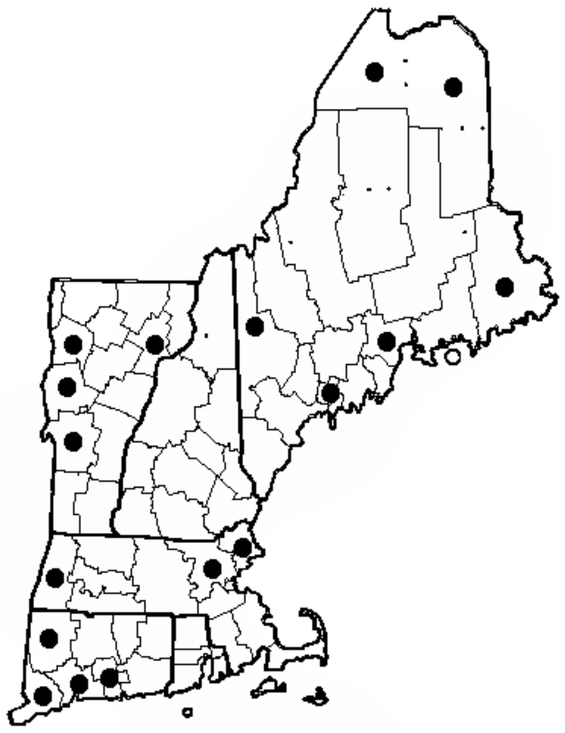
MYRIOPHYLLUM HETEROPHYLLUM



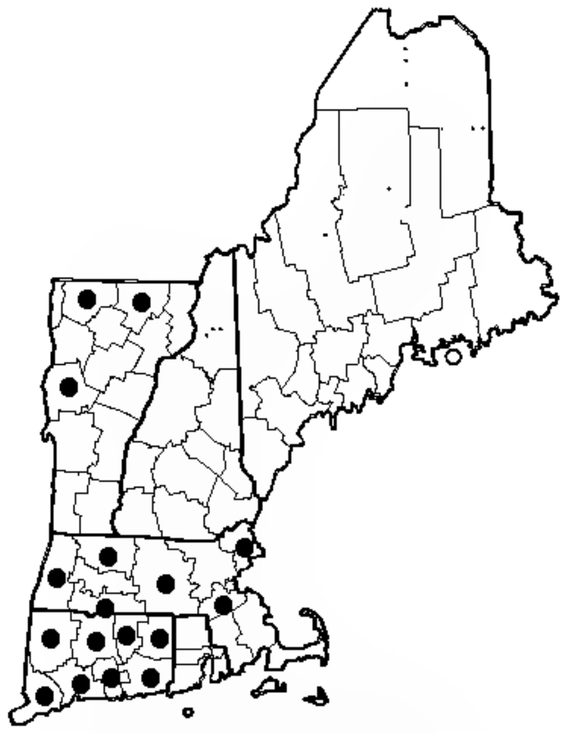
Myriophyllum humile



Myriophyllum pinnatum

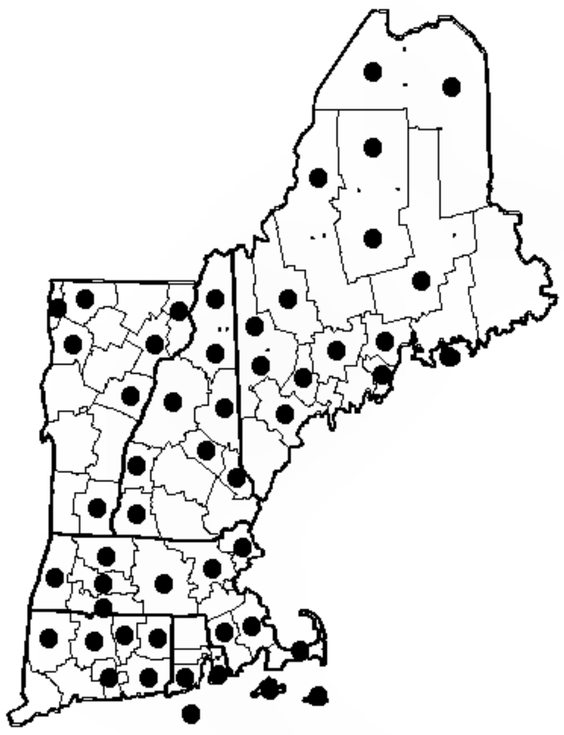


Myriophyllum sibiricum

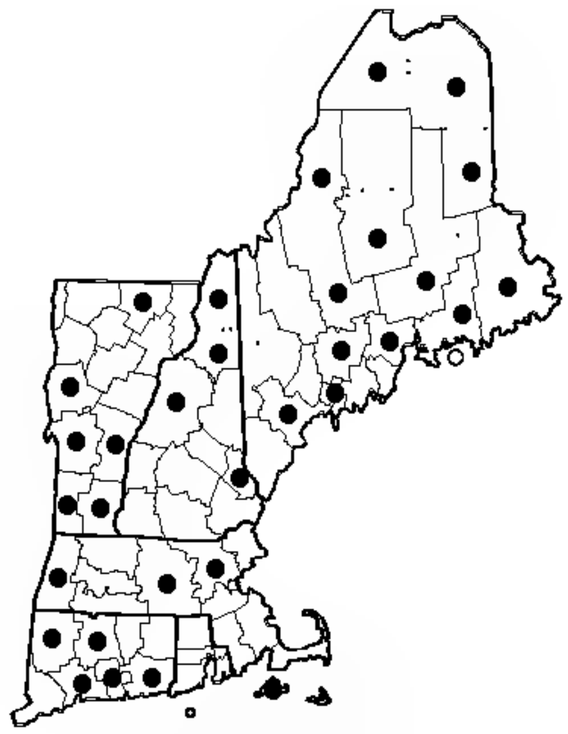


MYRIOPHYLLUM SPICATUM

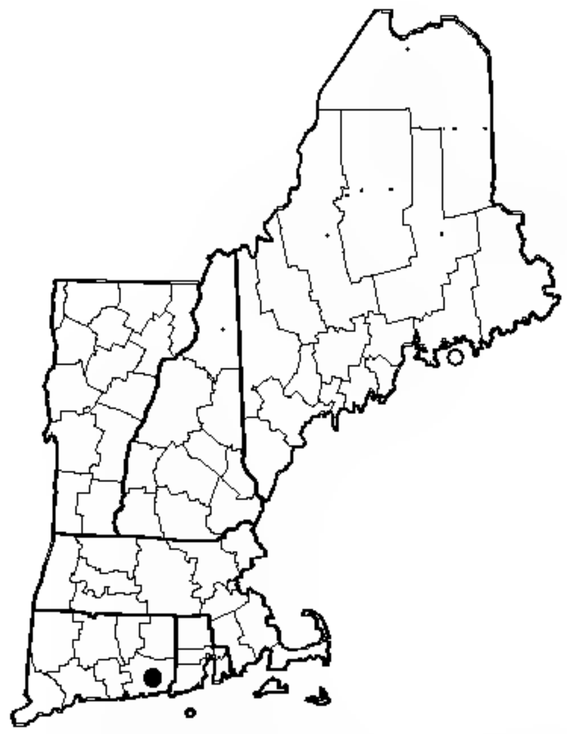
Figure 26 Distribution maps



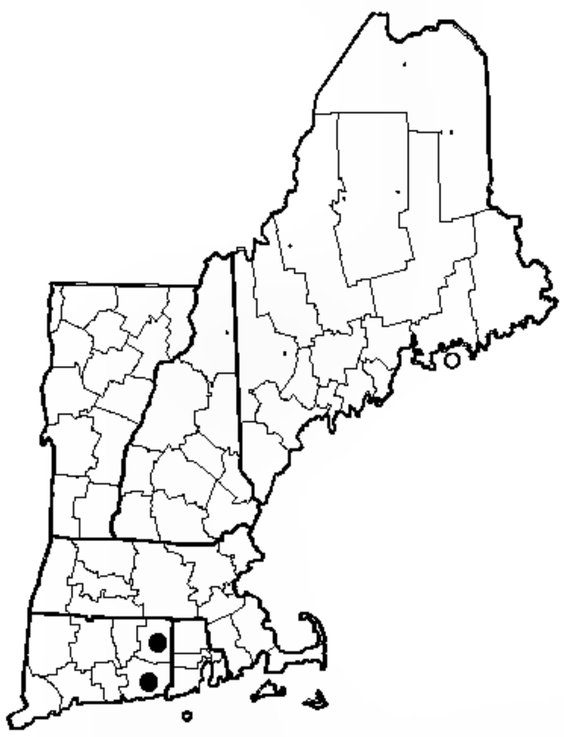
Myriophyllum tenellum



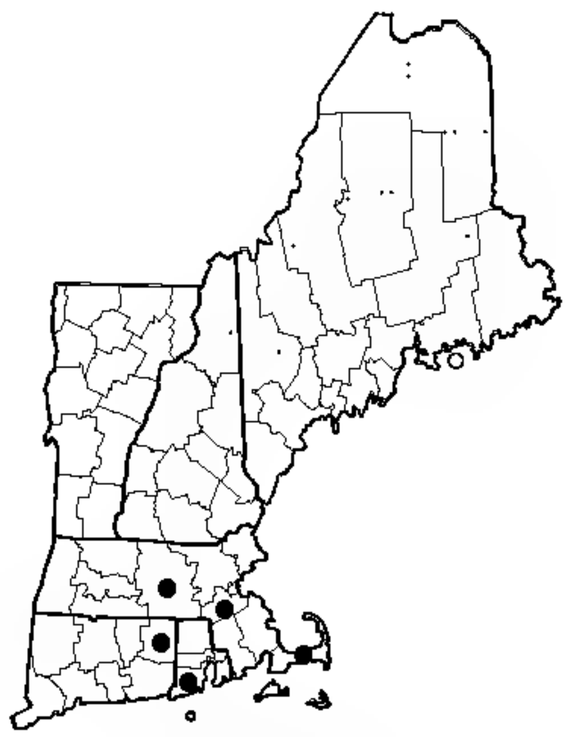
Myriophyllum verticillatum



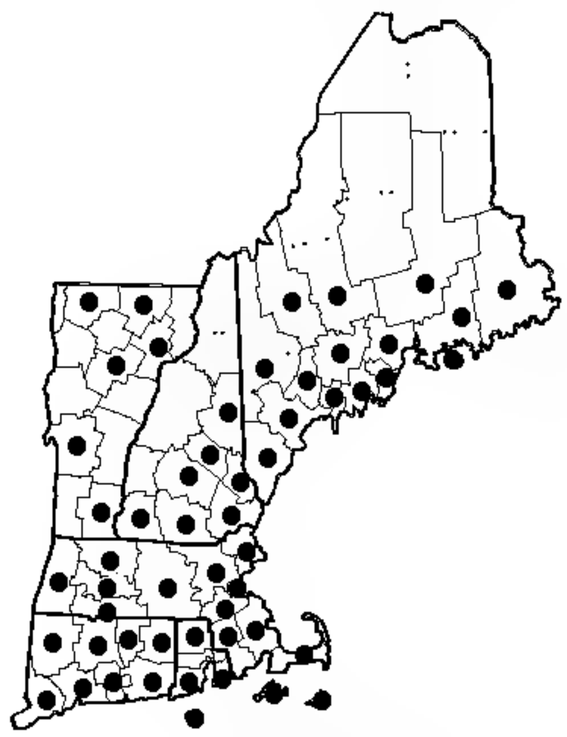
MYRIPHYLLUM HETEROPHYLLUM
X *M. LAXUM*



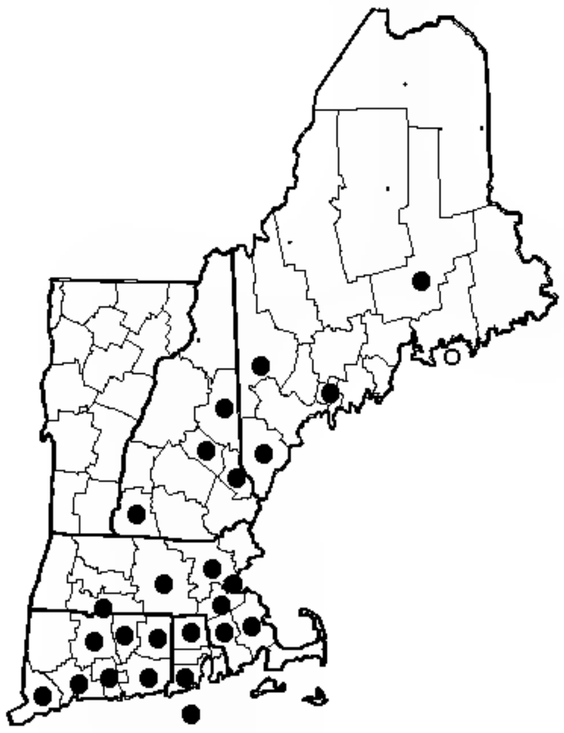
MYRIPHYLLUM HETEROPHYLLUM
X *M. pinnatum*



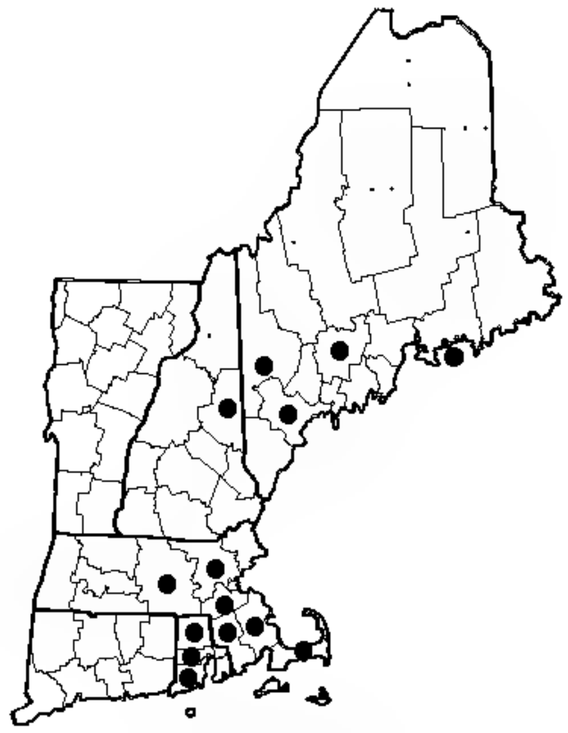
Proserpinaca intermedia



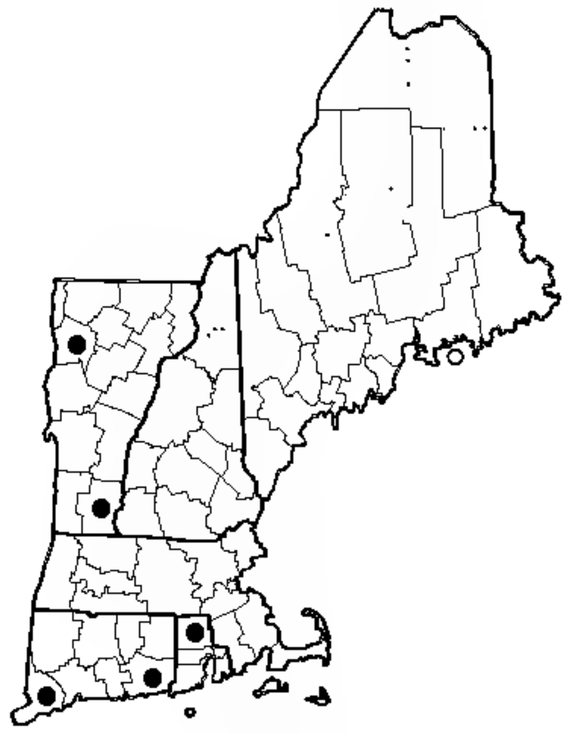
Proserpinaca palustris
var *palustris*



Proserpinaca palustris
var *crebra*

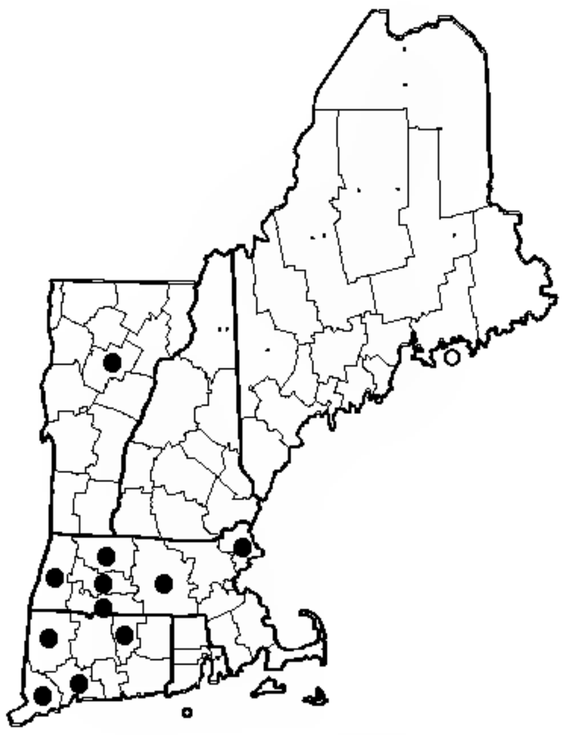


Proserpinaca pectinata

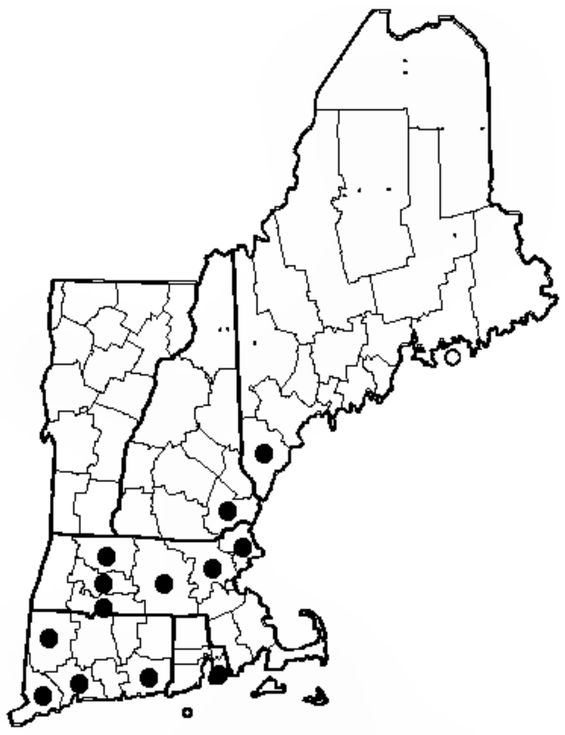


DEUTZIA SCABRA

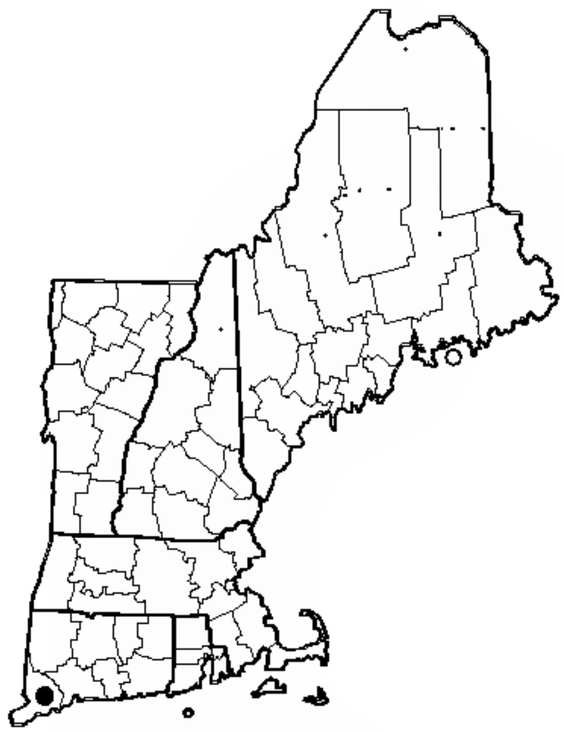
Figure 27 Distribution maps



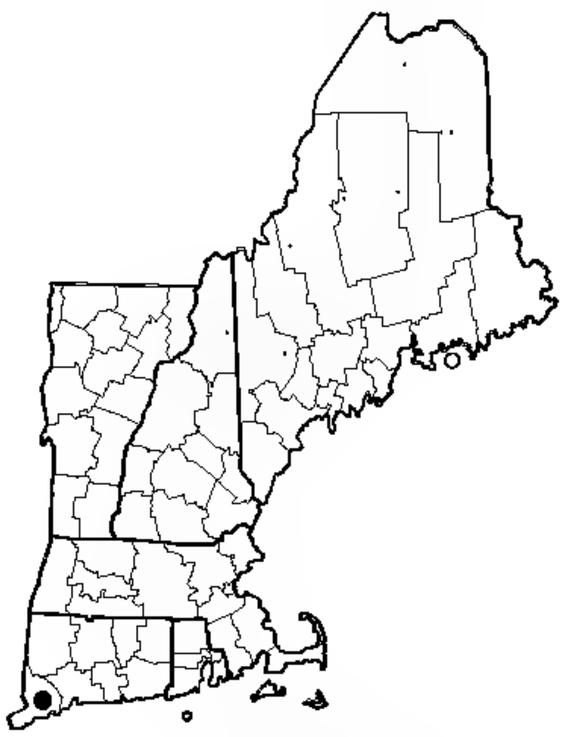
HYDRANGEA ARBORESCENS



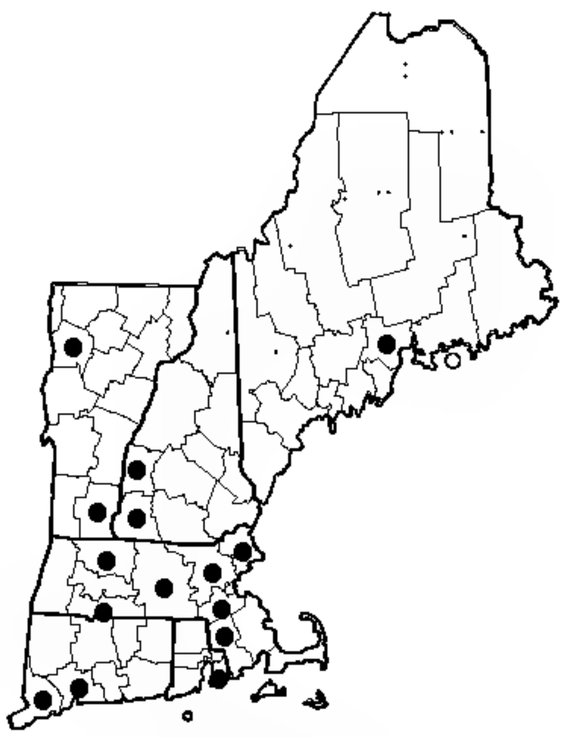
HYDRANGEA PANICULATA



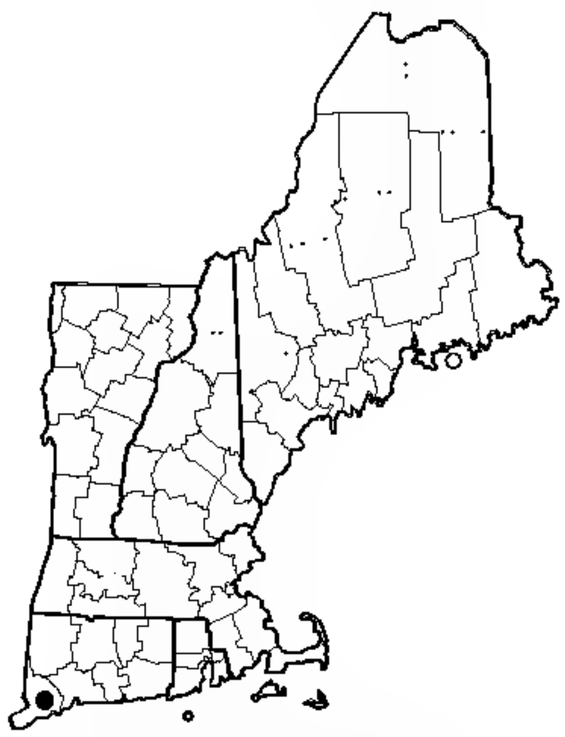
HYDRANGEA QUERCIFOLIA



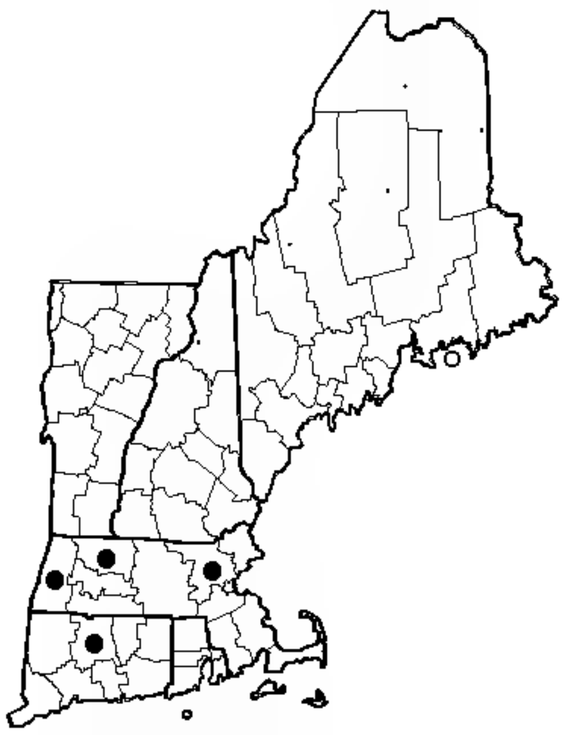
HYDRANGEA RADIATA



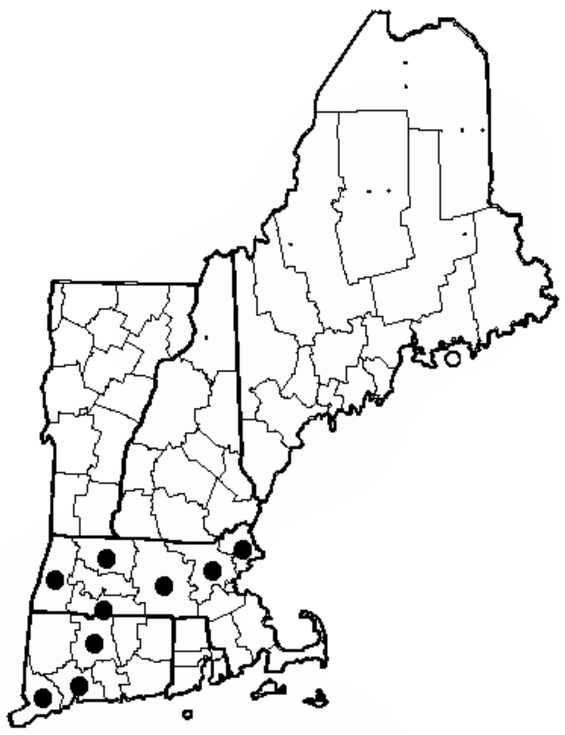
PHILADELPHUS CORONARIUS



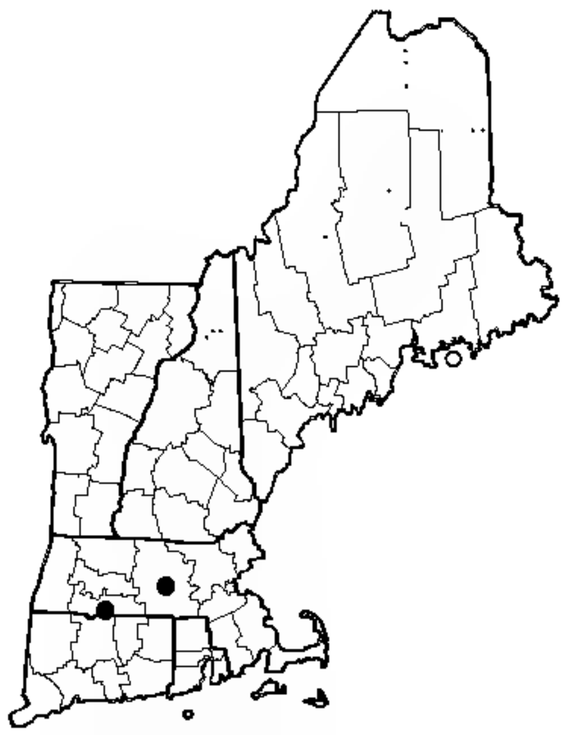
PHILADELPHUS INCANUS



PHILADELPHUS INODORUS

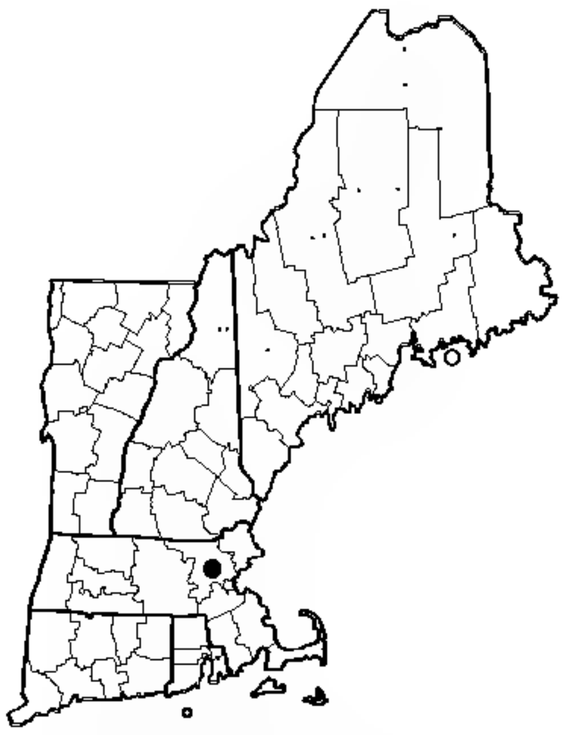


PHILADELPHUS PUBESCENS

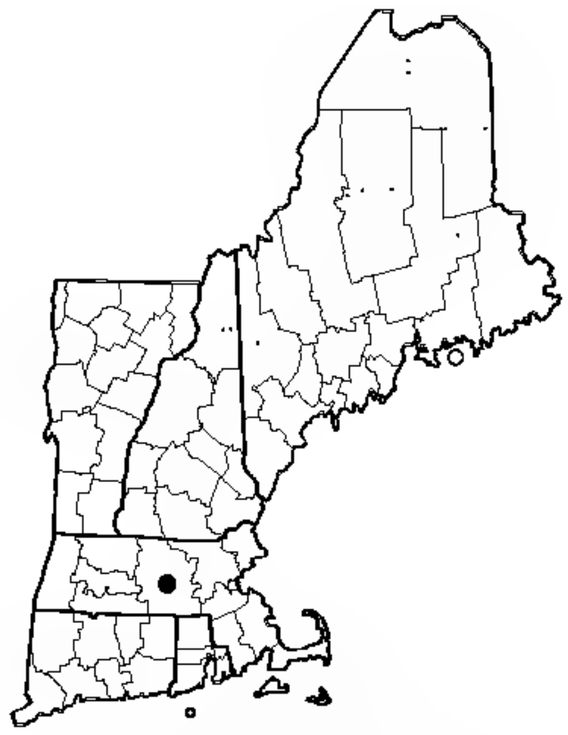


PHILADELPHUS X NIVALIS

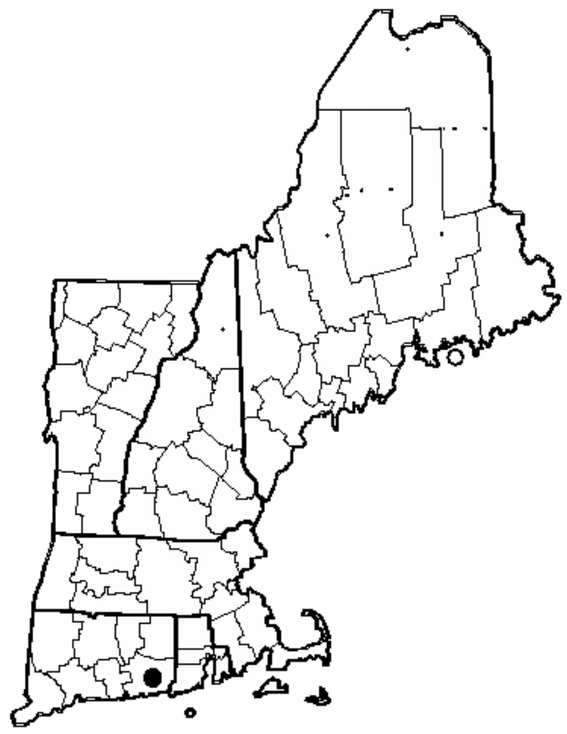
Figure 28 Distribution maps



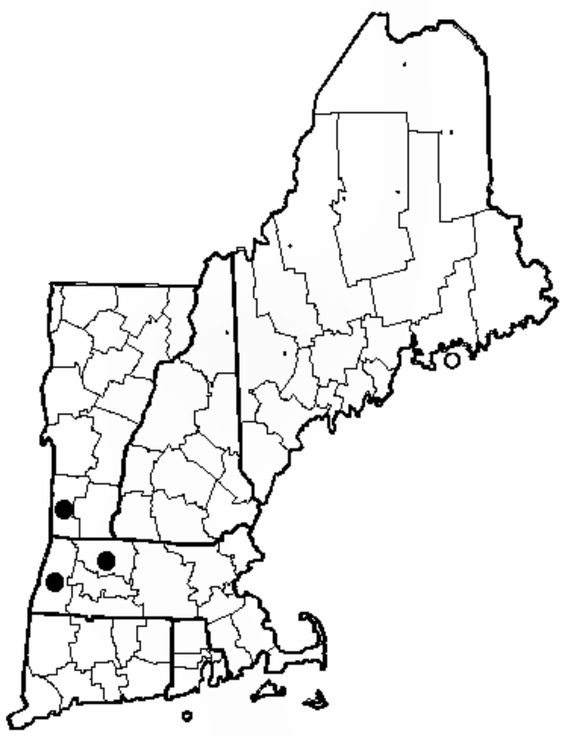
PHILADELPHUS X POLYANTHUS



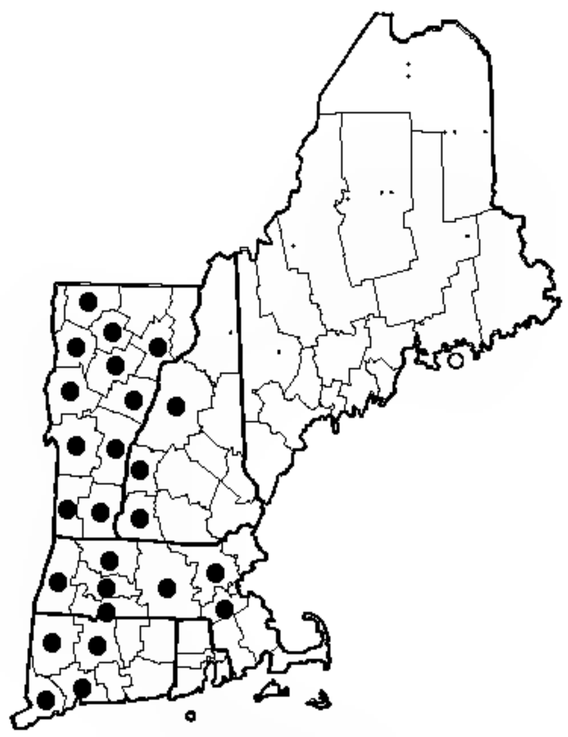
PHILADELPHUS X VIRGINALIS



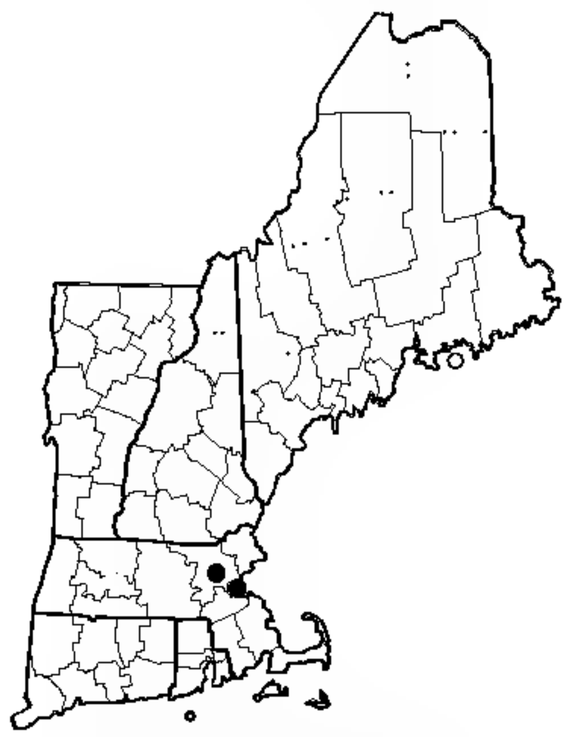
ELLISIA NYCTELEA



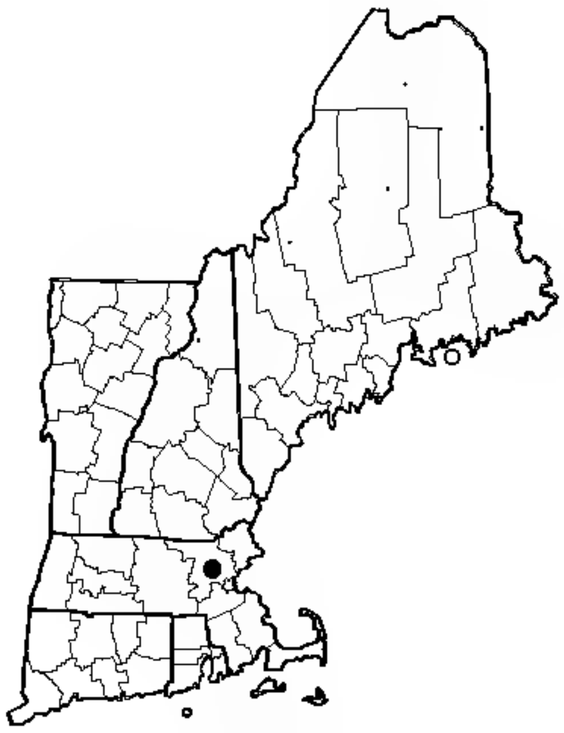
Hydrophyllum canadense



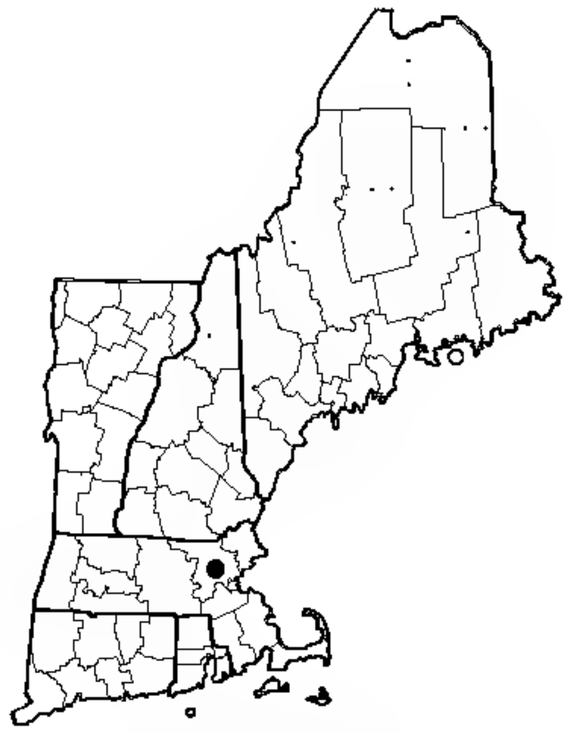
Hydrophyllum virginianum var *virginianum*



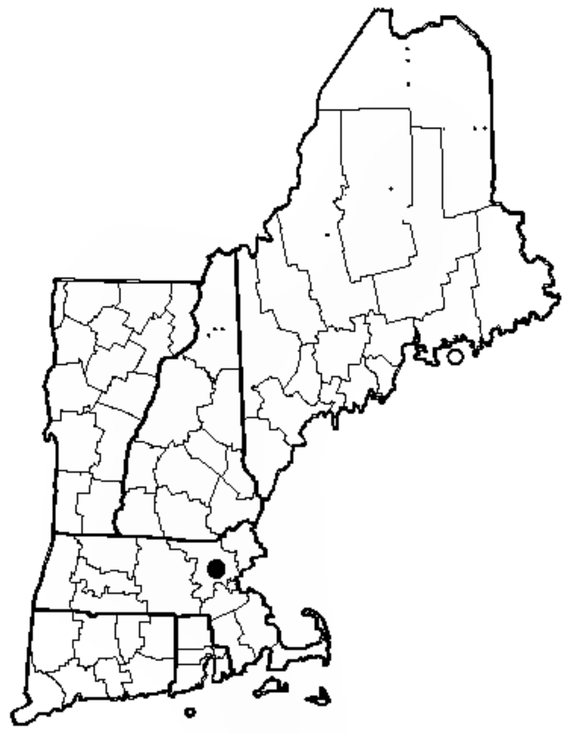
PHACELIA BRACHYLOBA



PHACELIA DISTANS

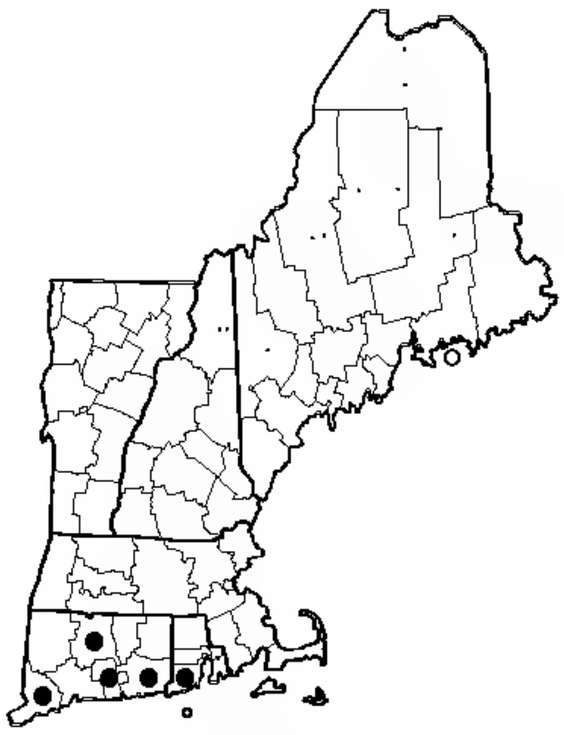


PHACELIA EGENA

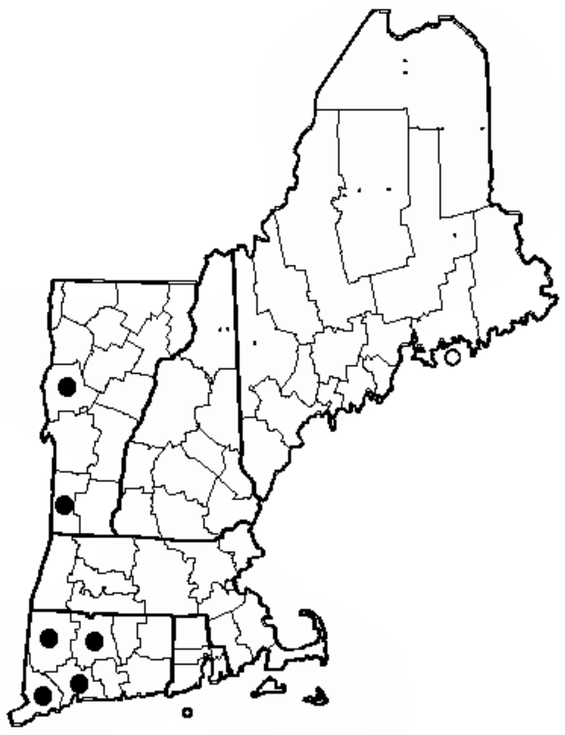


PHACELIA MINOR

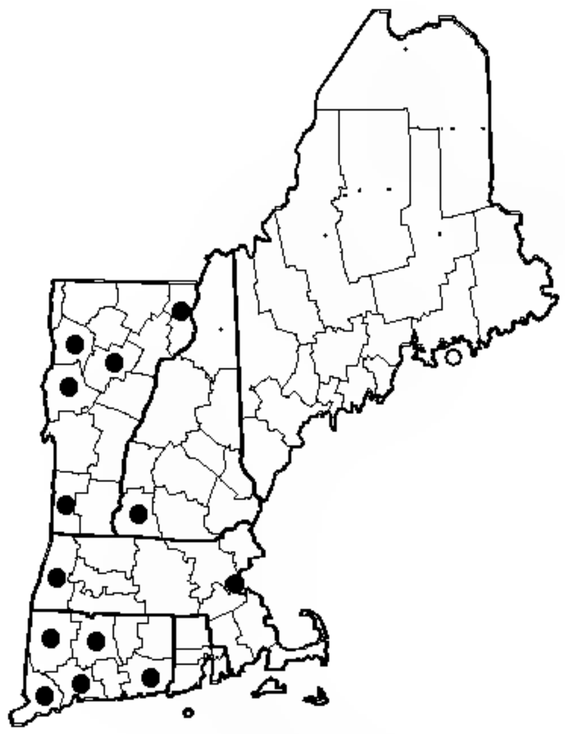
Figure 29 Distribution maps



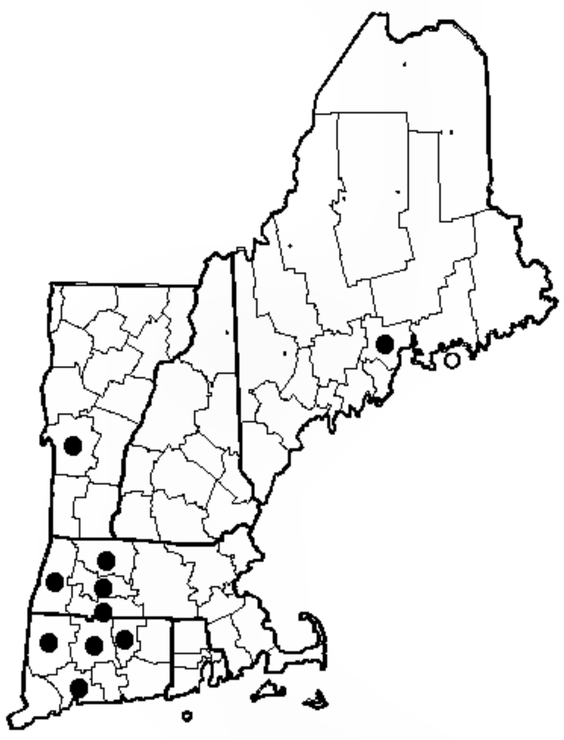
AGASTACHE FOENICULUM



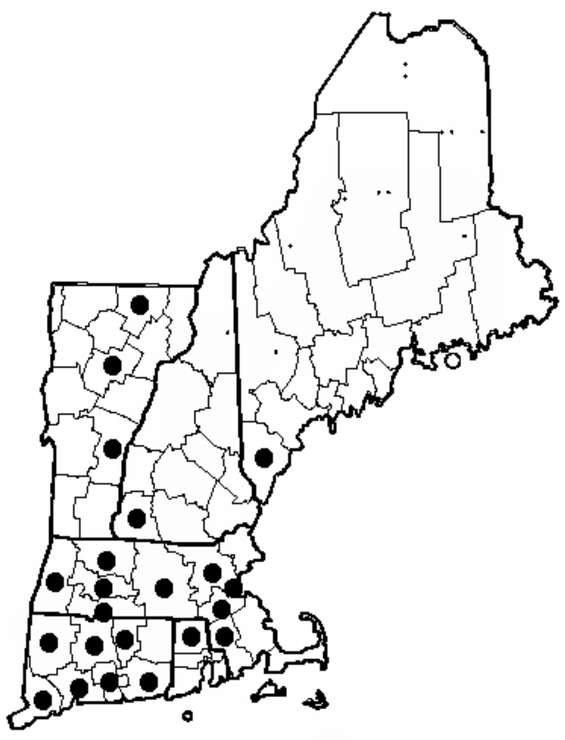
Agastache nepetoides



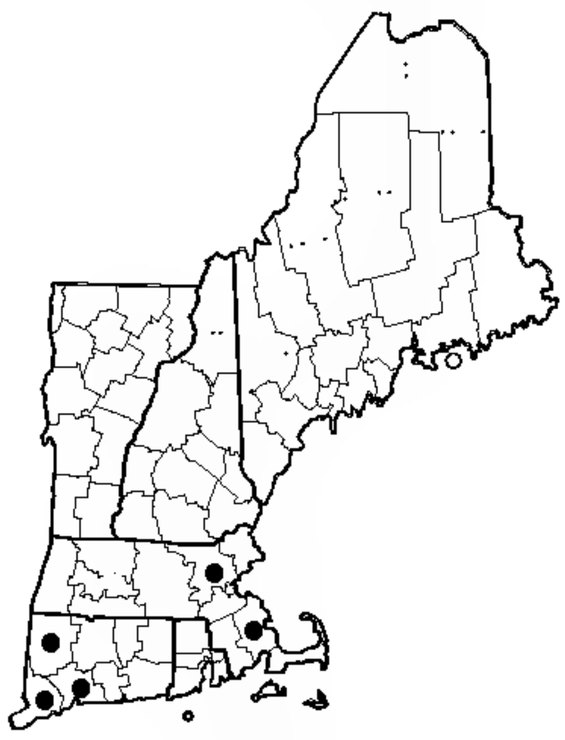
Agastache scrophulariifolia



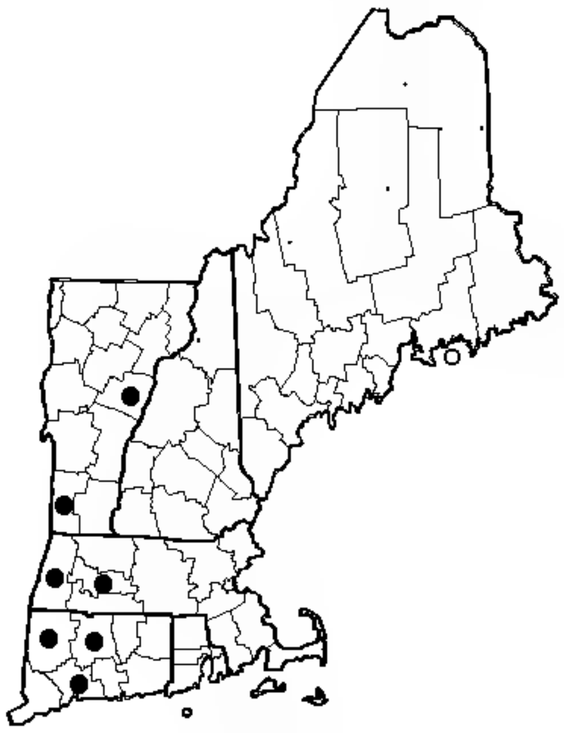
AJUGA GENEVENSIS



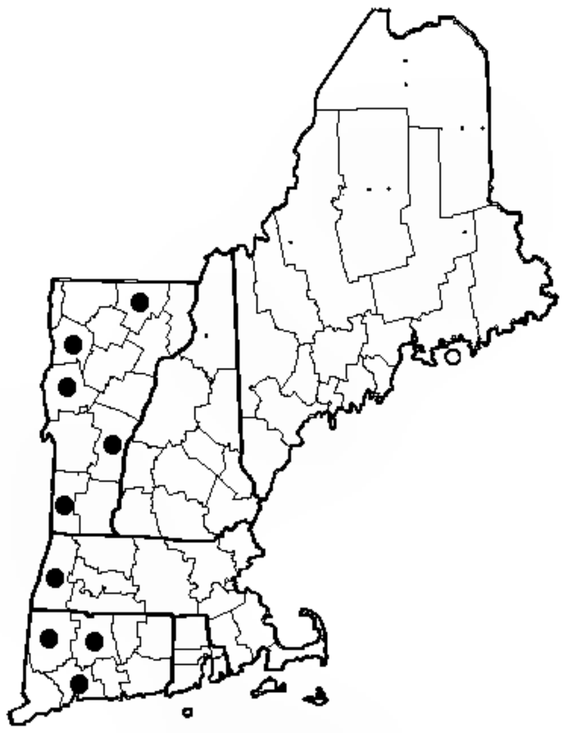
AJUGA REPTANS



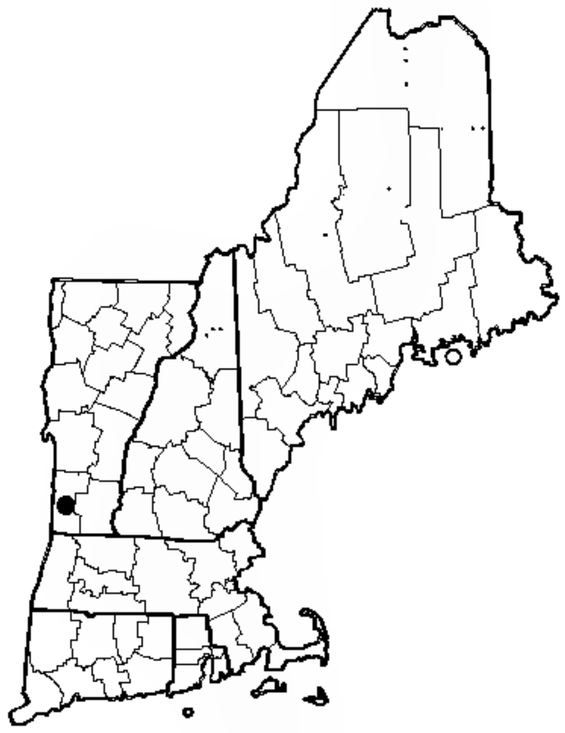
BALLOTA NIGRA
var *NIGRA*



Blephilia ciliata

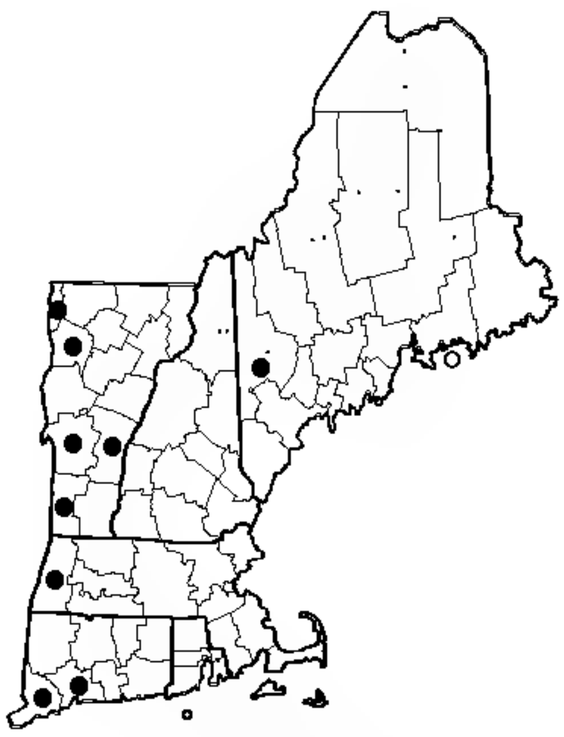


Blephilia hirsuta
var *hirsuta*

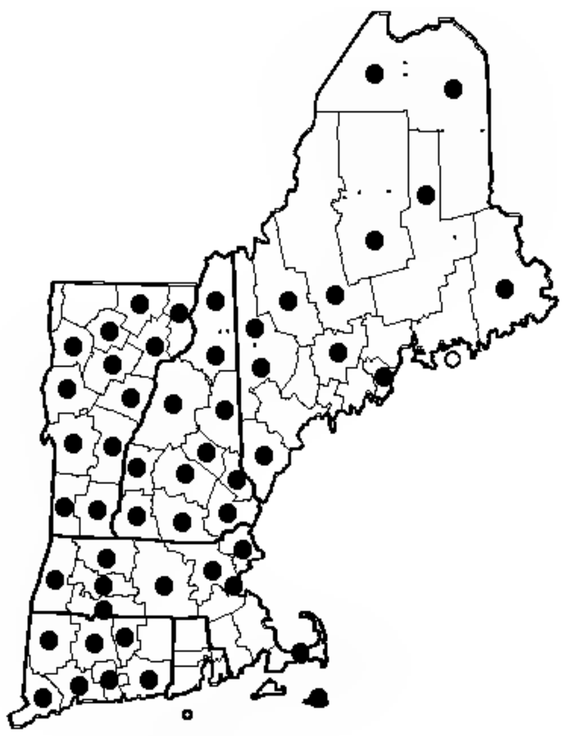


Blephilia hirsuta
var *glabrata*

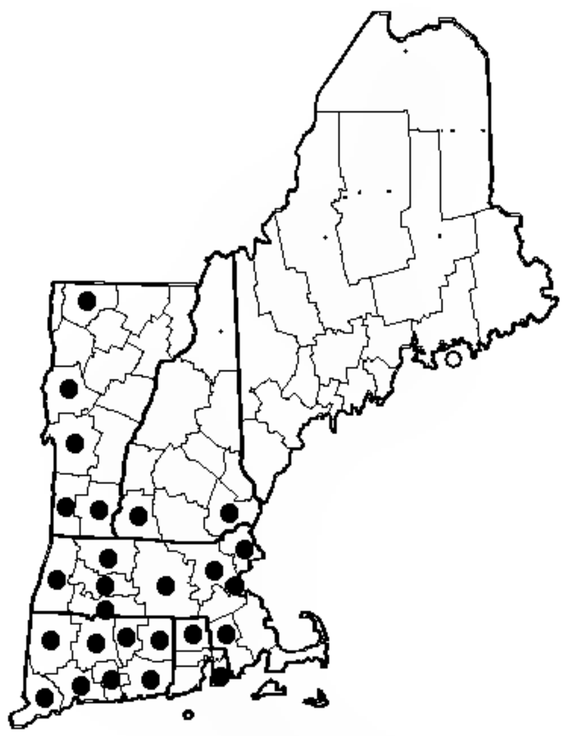
Figure 30 Distribution maps



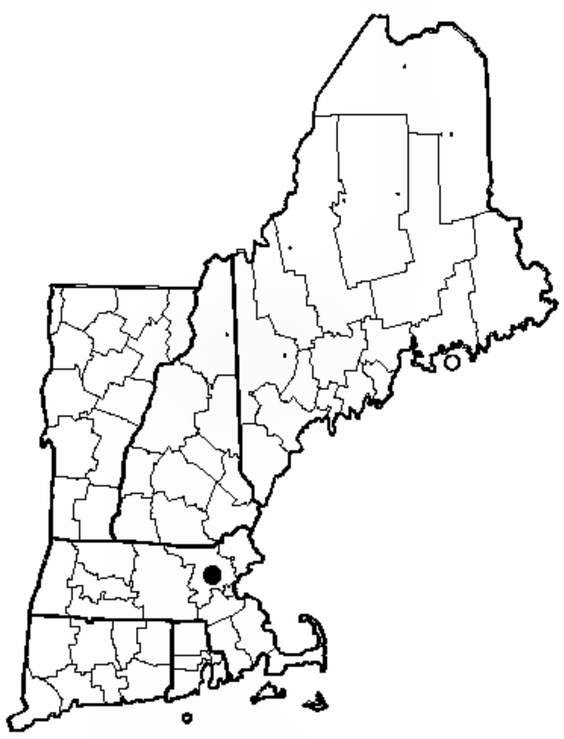
CLINOPODIUM ACINOS



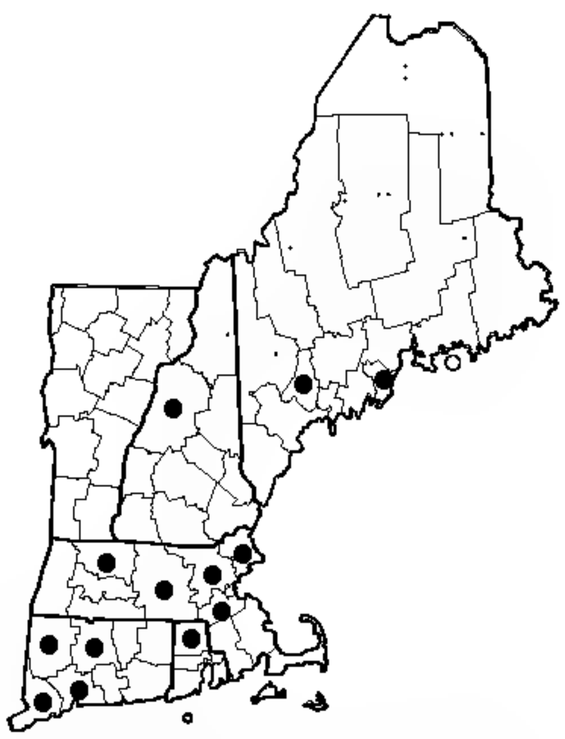
Clinopodium vulgare



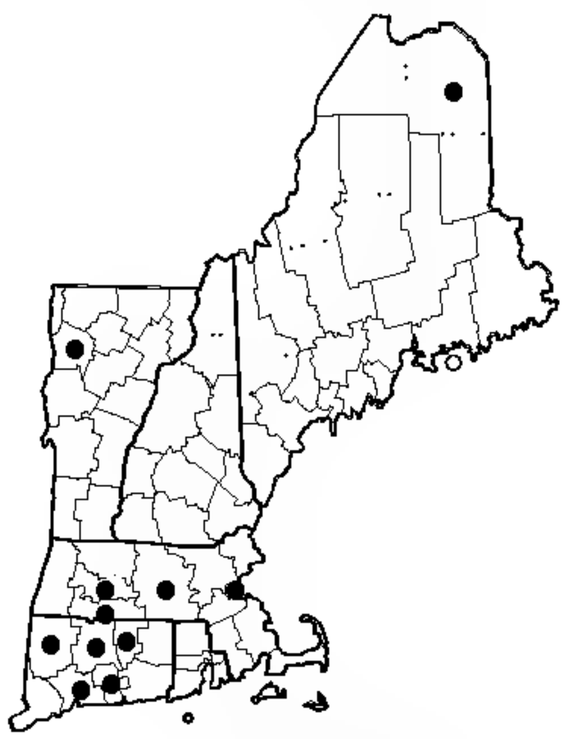
Collinsonia canadensis



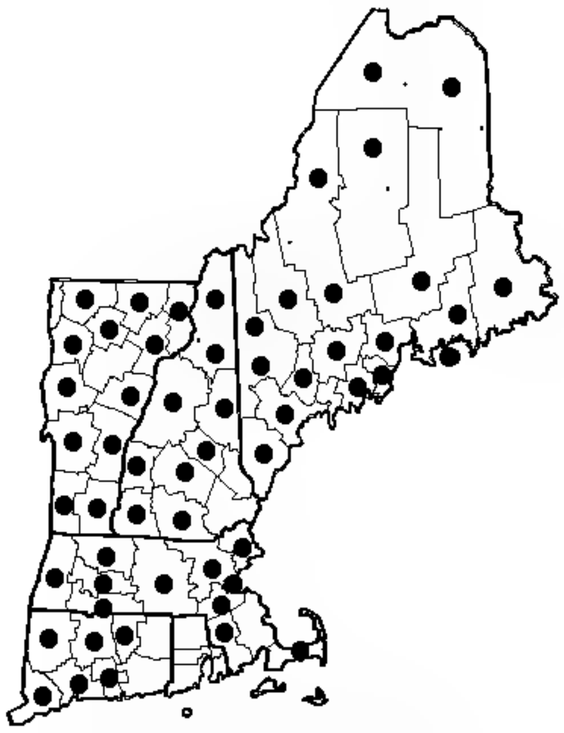
DRACOCEPHALUM MOLDAVICA



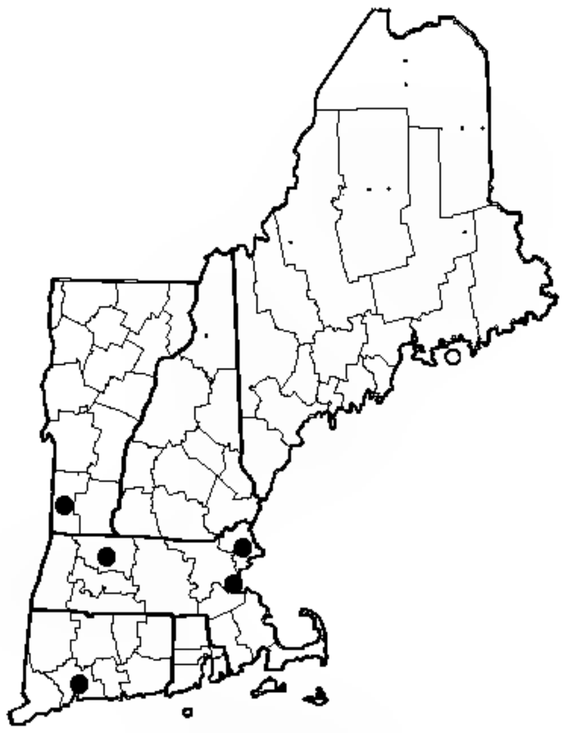
DRACOCEPHALUM PARVIFLORUM



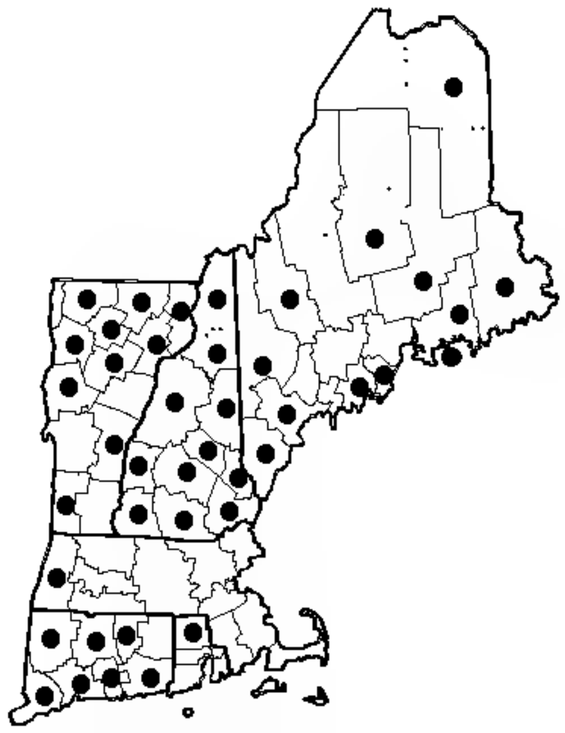
ELSHOLTZIA CILIATA



GALEOPSIS BIFIDA

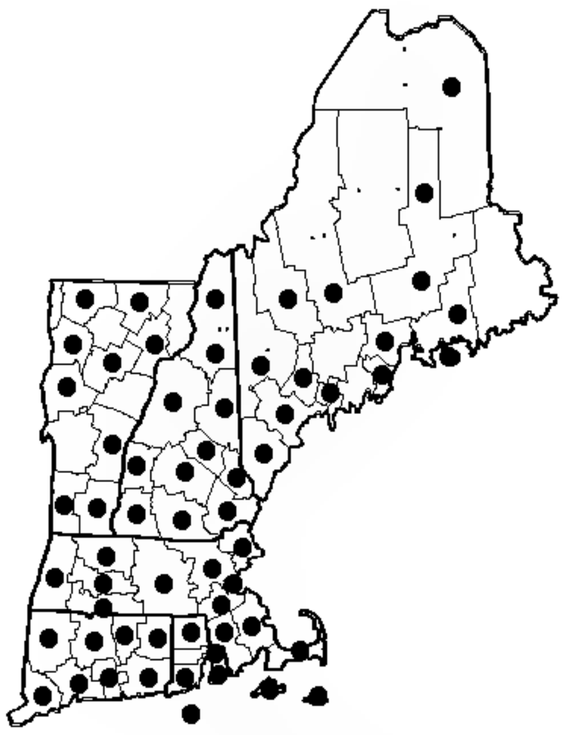


GALEOPSIS LADANUM
var *LADANUM*

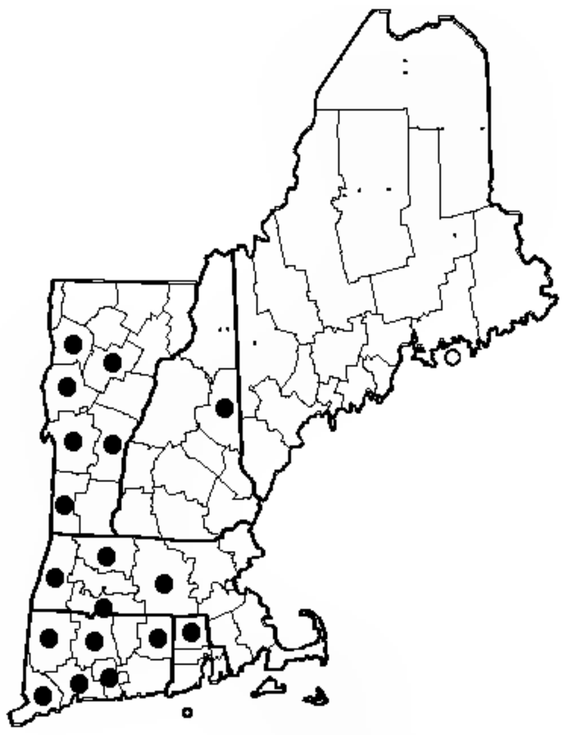


GALEOPSIS TETRAHIT

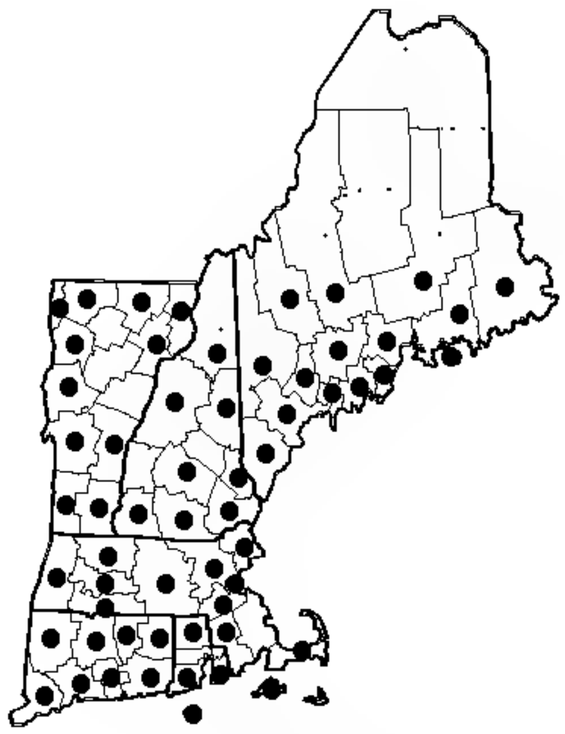
Figure 31 Distribution maps



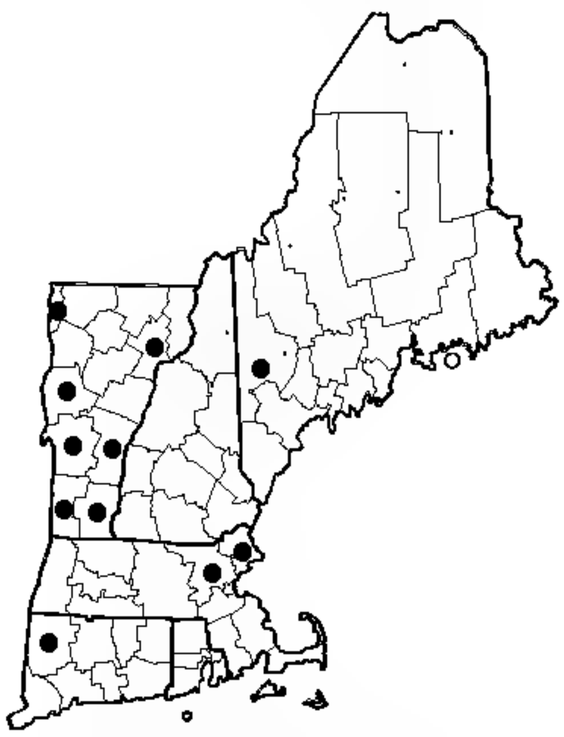
GLECHOMA HEDERACEA



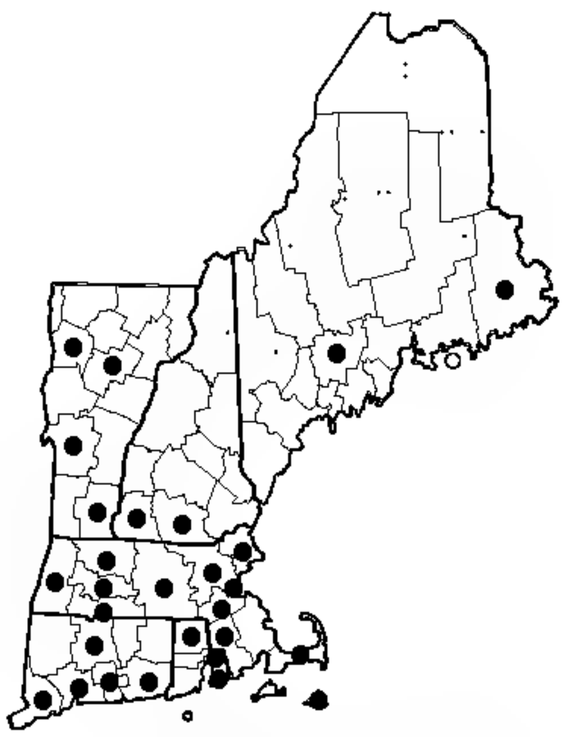
HEDEOMA HISPIDA



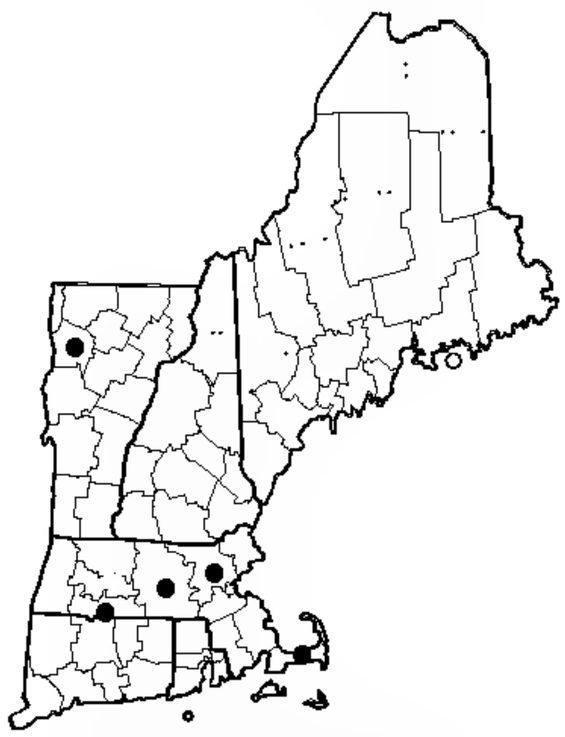
Hedeoma pulegioides



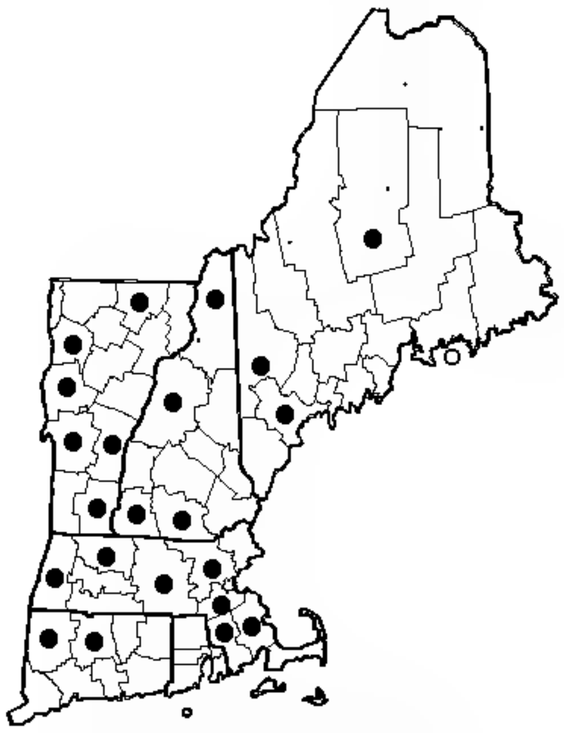
HYSSOPUS OFFICINALIS



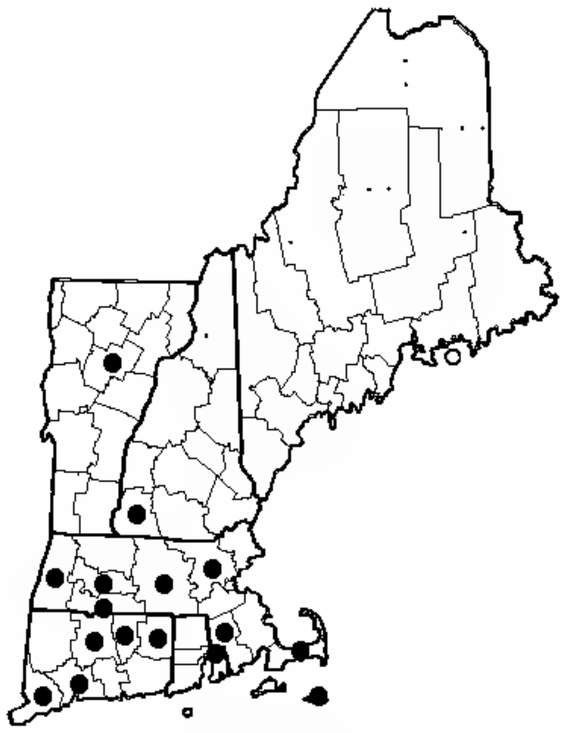
LAMIUM AMPLEXICAULE



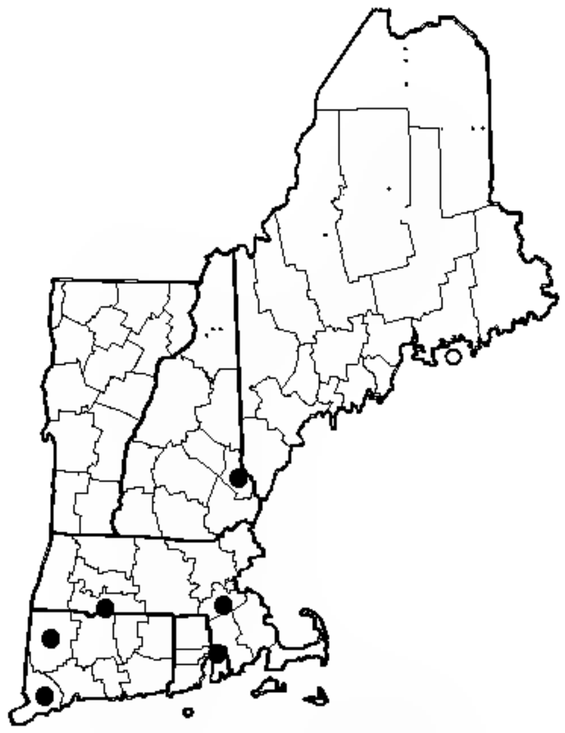
LAMIUM GALEOBDOLON



LAMIUM MACULATUM

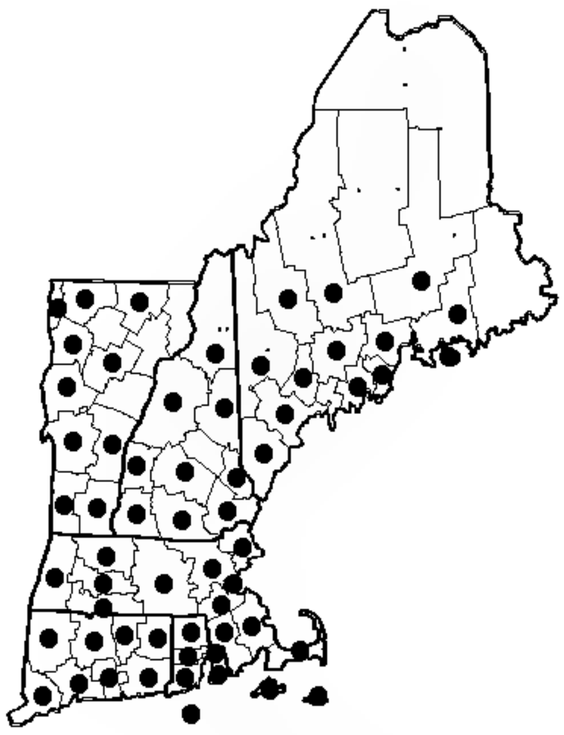


LAMIUM PURPUREUM
var *PURPUREUM*

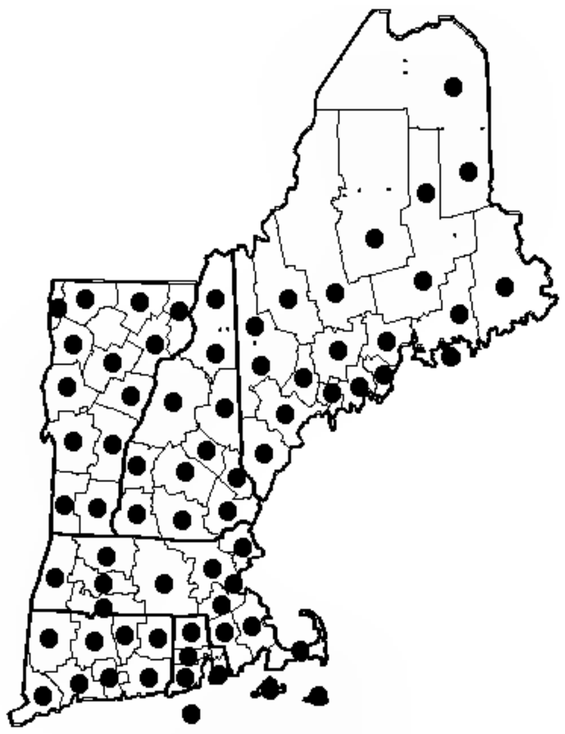


LAMIUM PURPUREUM
var *INCISUM*

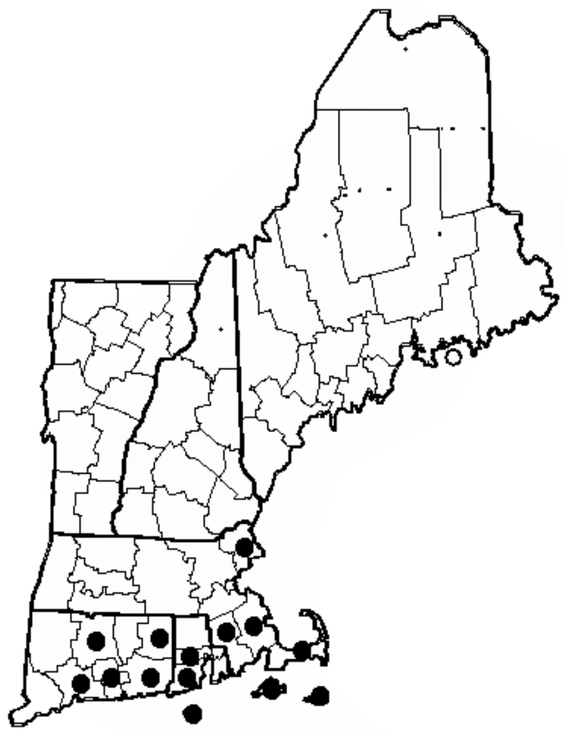
Figure 32 Distribution maps



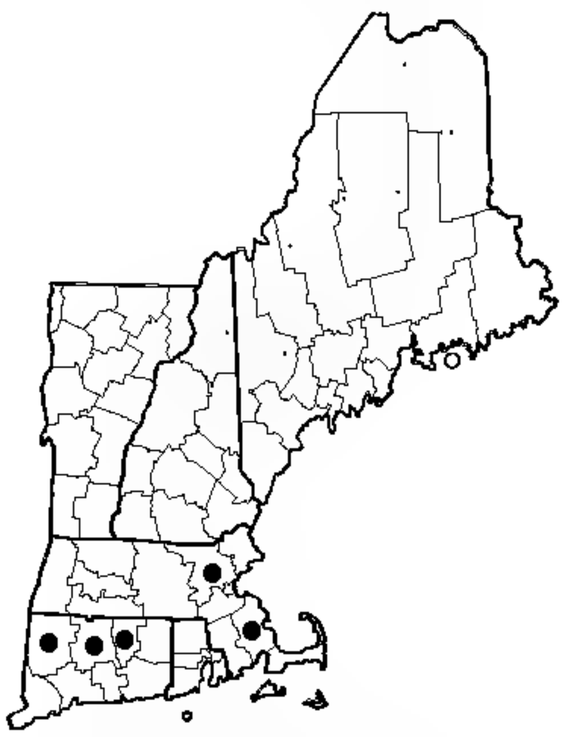
LEONURUS CARDIACA
subsp. *CARDIACA*



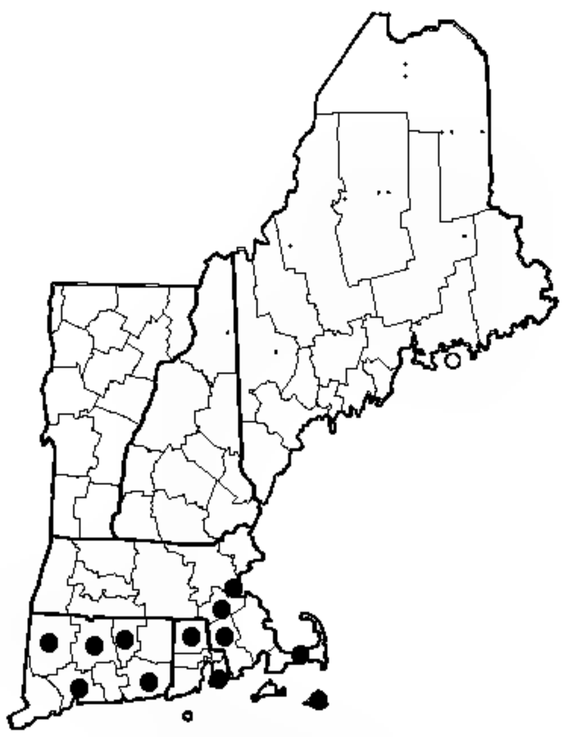
Lycopus americanus



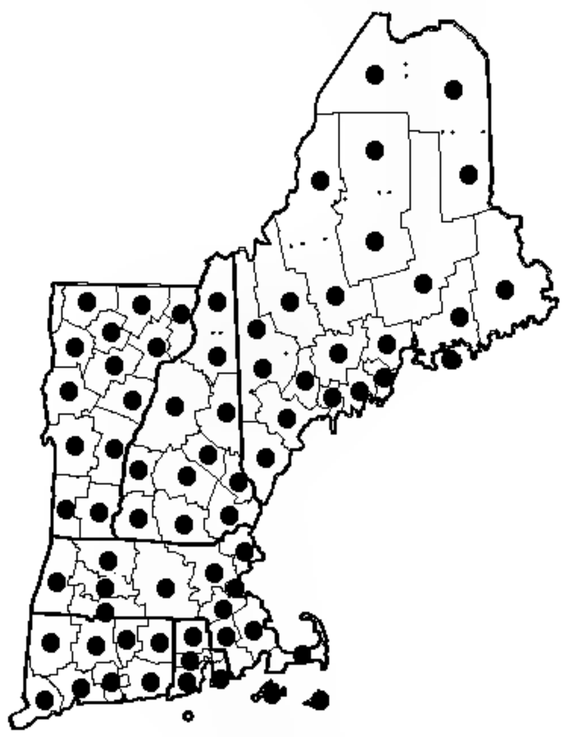
Lycopus amplectens



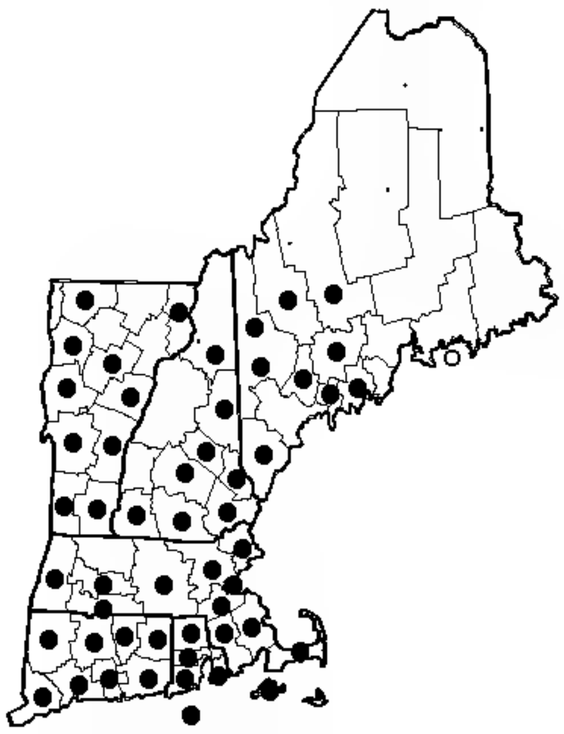
LYCOPUS EUROPAEUS



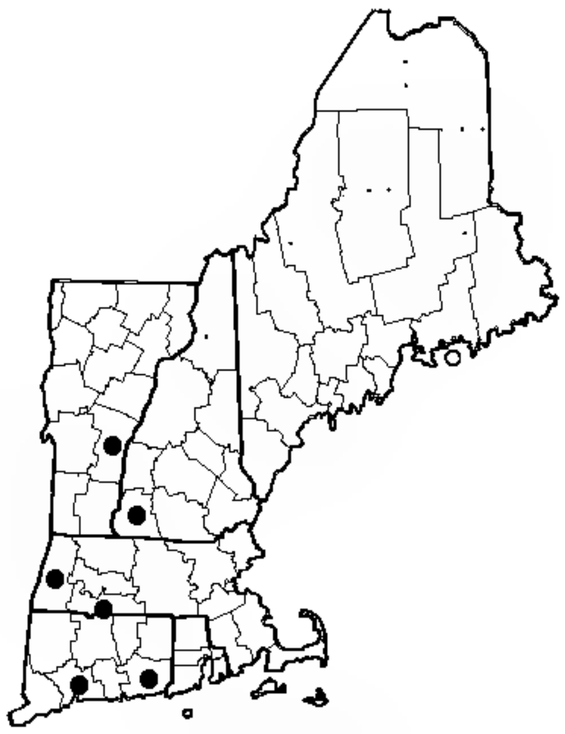
Lycopus rubellus



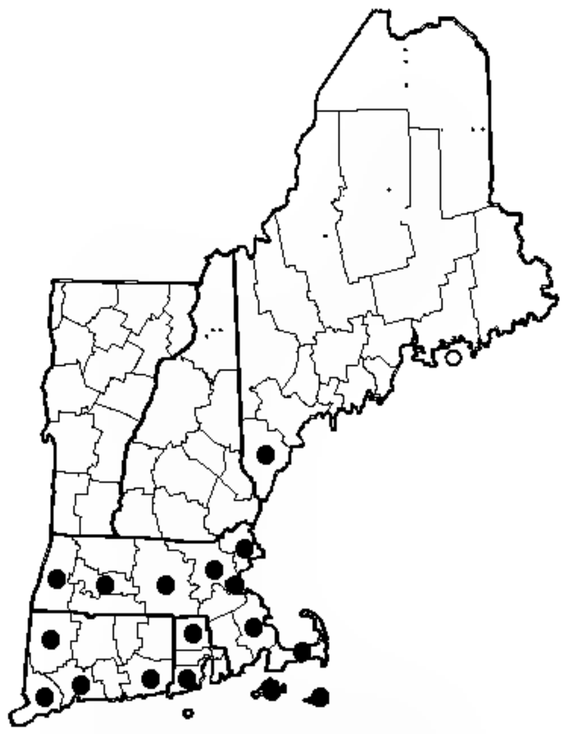
Lycopus uniflorus
var *uniflorus*



Lycopus virginicus

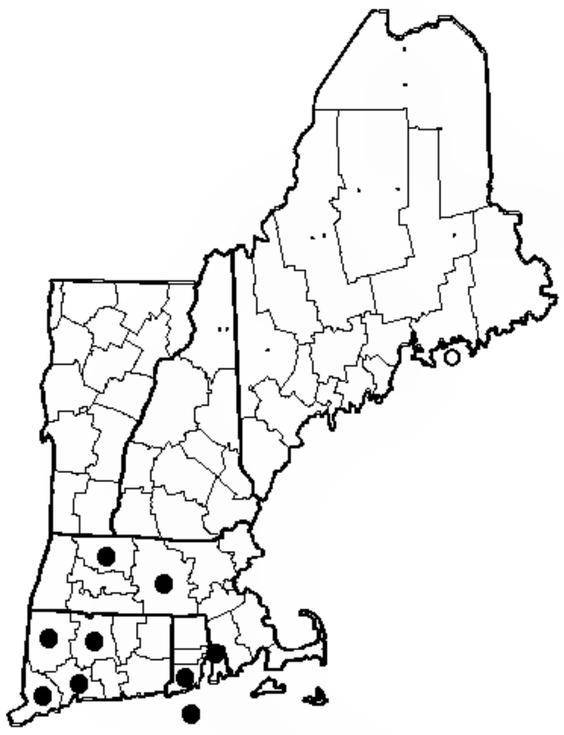


Lycopus X sherardii

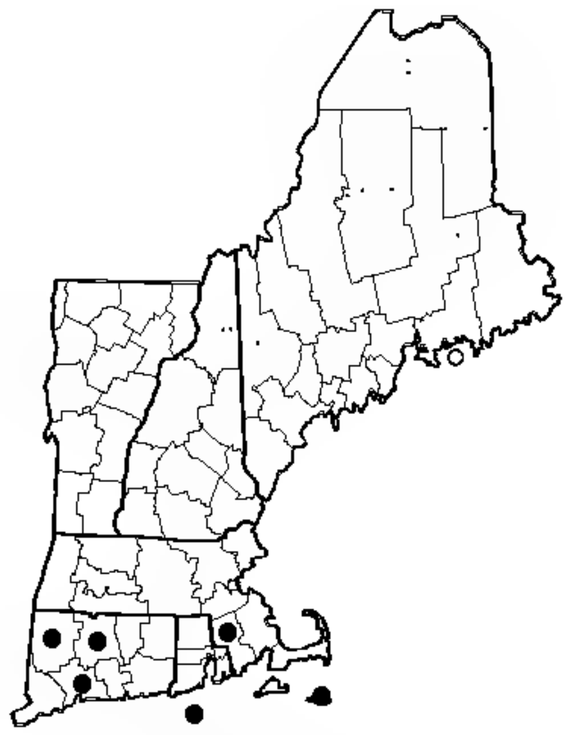


MARRUBIUM VULGARE

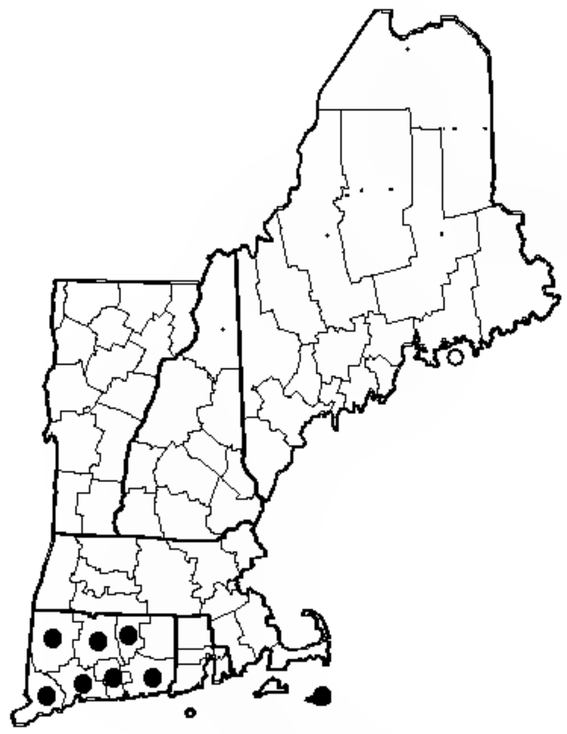
Figure 33 Distribution maps



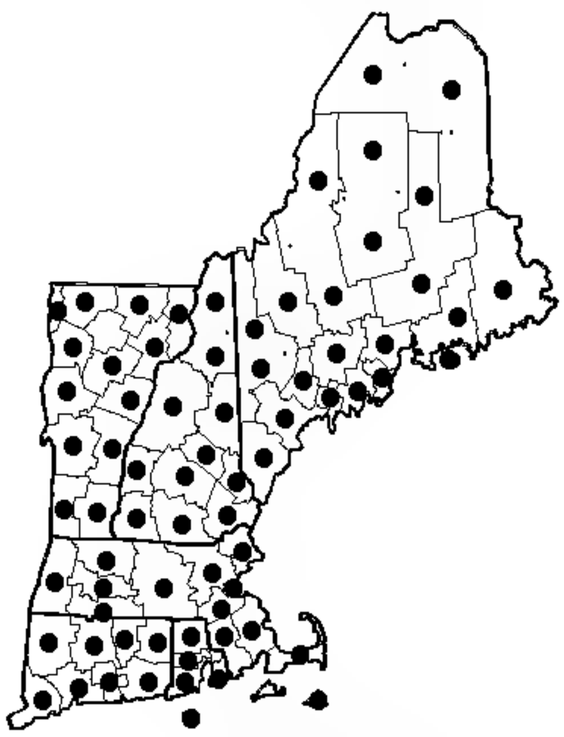
MELISSA OFFICINALIS



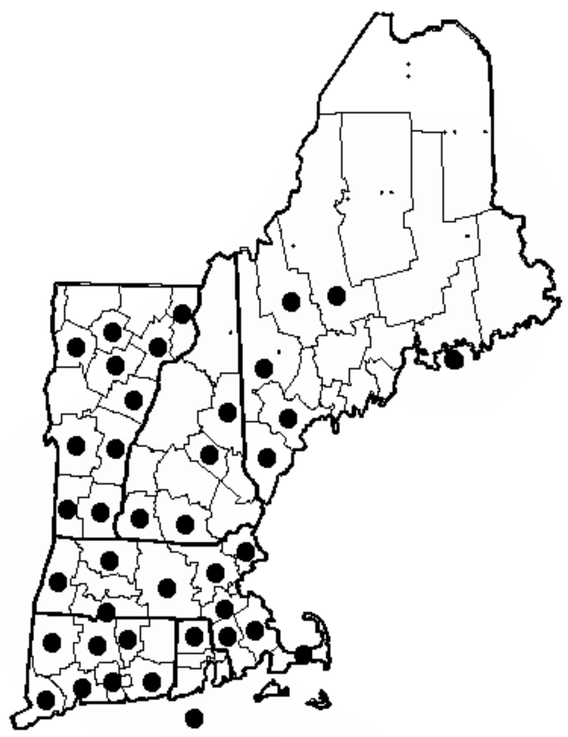
MENTHA AQUATICA
var *CITRATA*



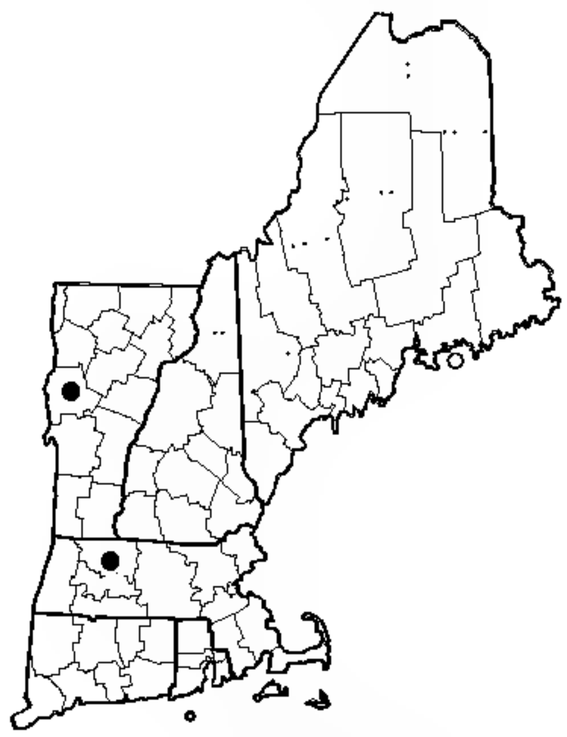
MENTHA ARVENSIS
subsp. *PARIETARIIFOLIA*



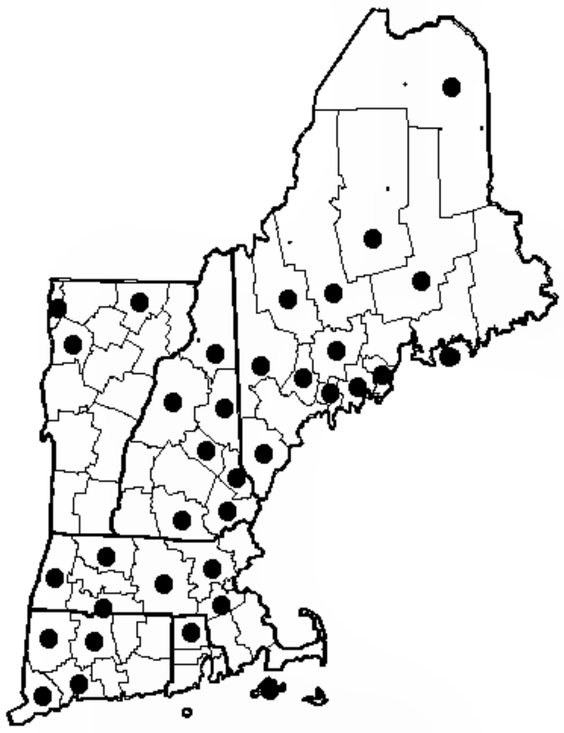
Mentha canadensis



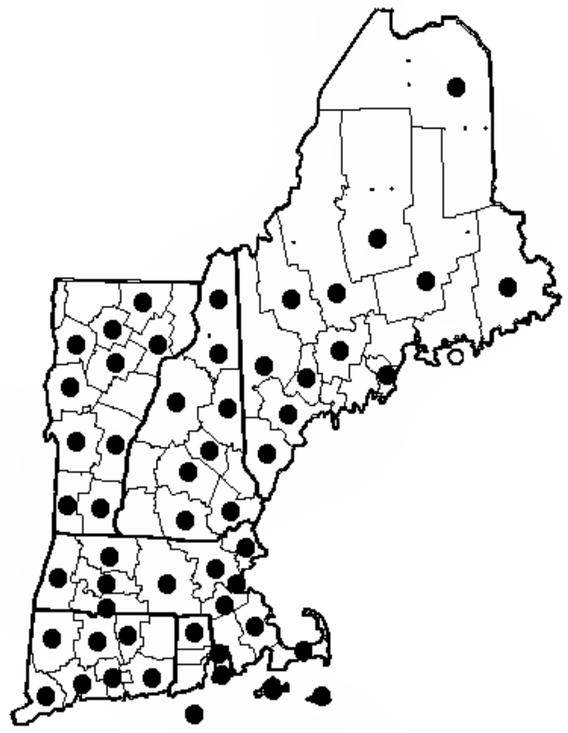
MENTHA SPICATA
var *SPICATA*



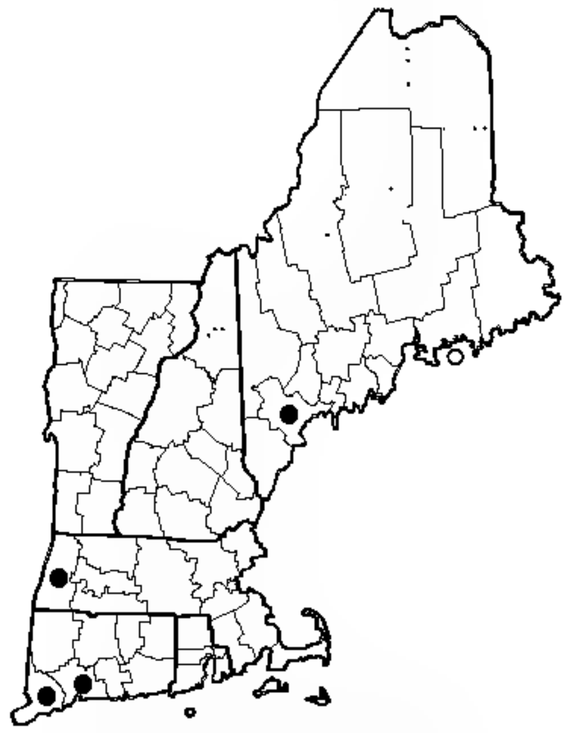
MENTHA SUAVEOLENS
subsp. *SUAVEOLENS*



MENTHA X GRACILIS

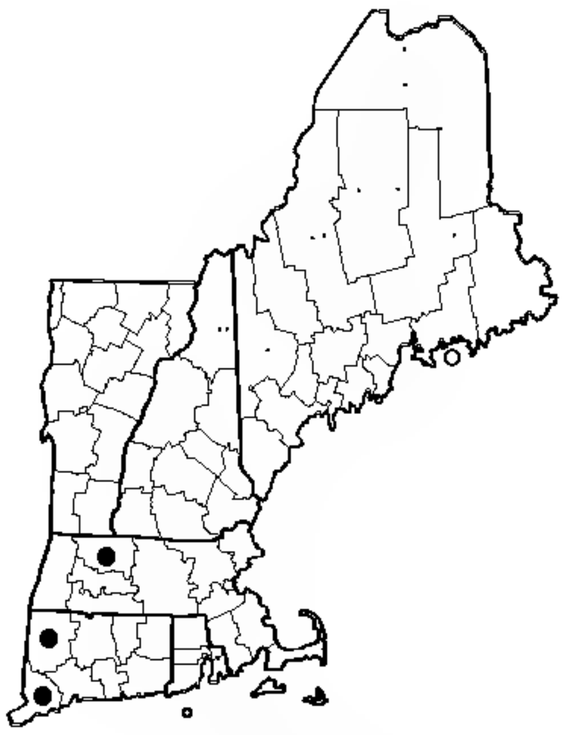


MENTHA X PIPERITA

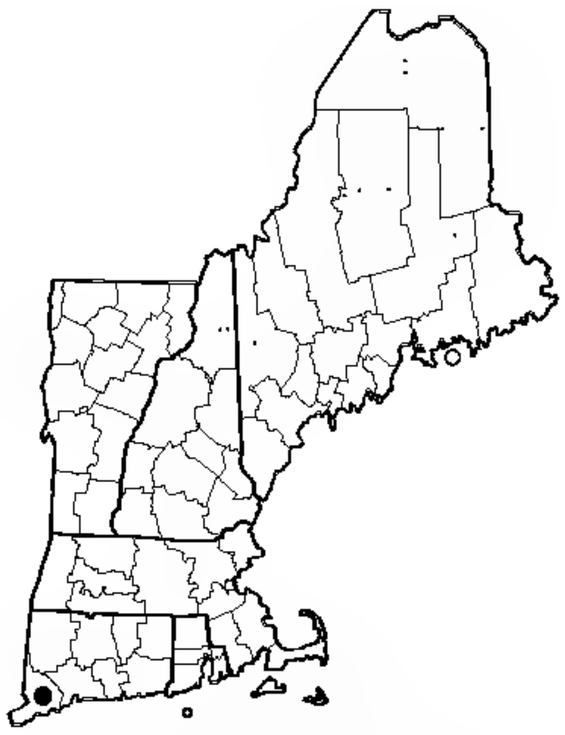


MENTHA X ROTUNDIFOLIA

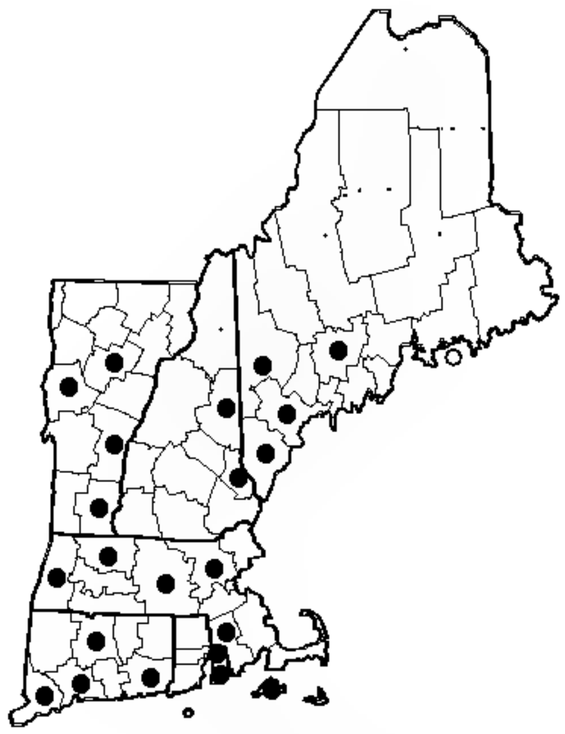
Figure 34 Distribution maps



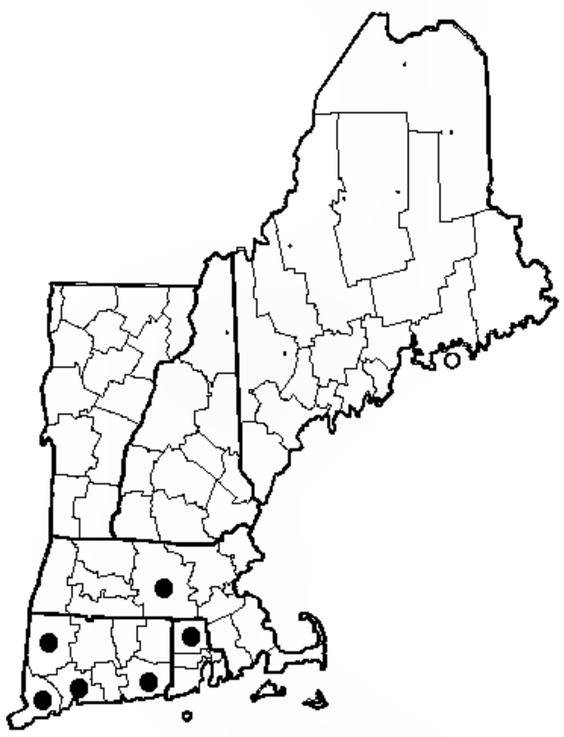
MENTHA X SMITHIANA



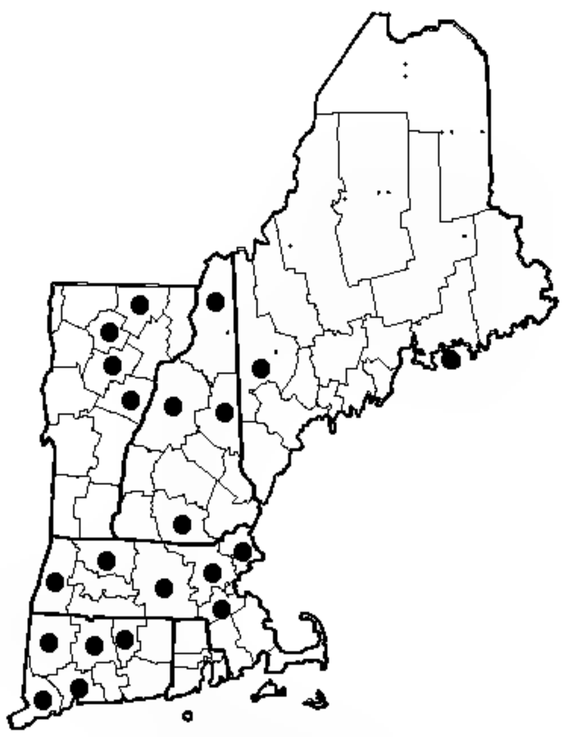
MENTHA X VERTICILLATA



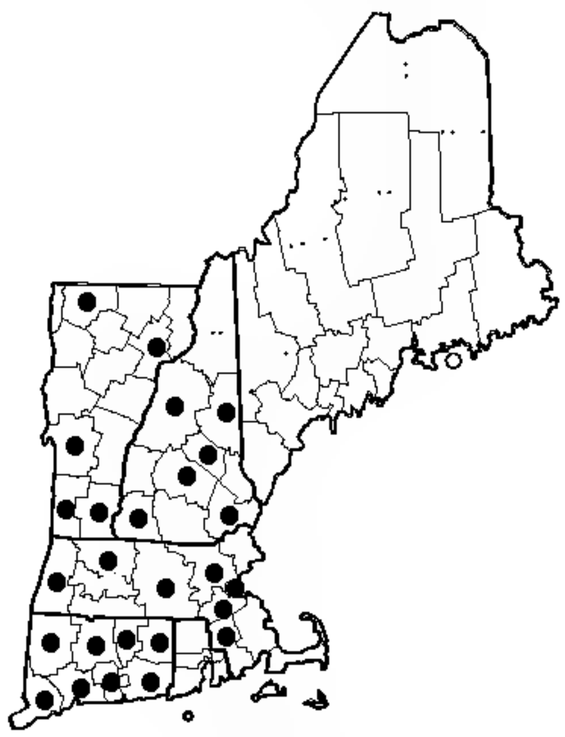
MENTHA X VILLOSA



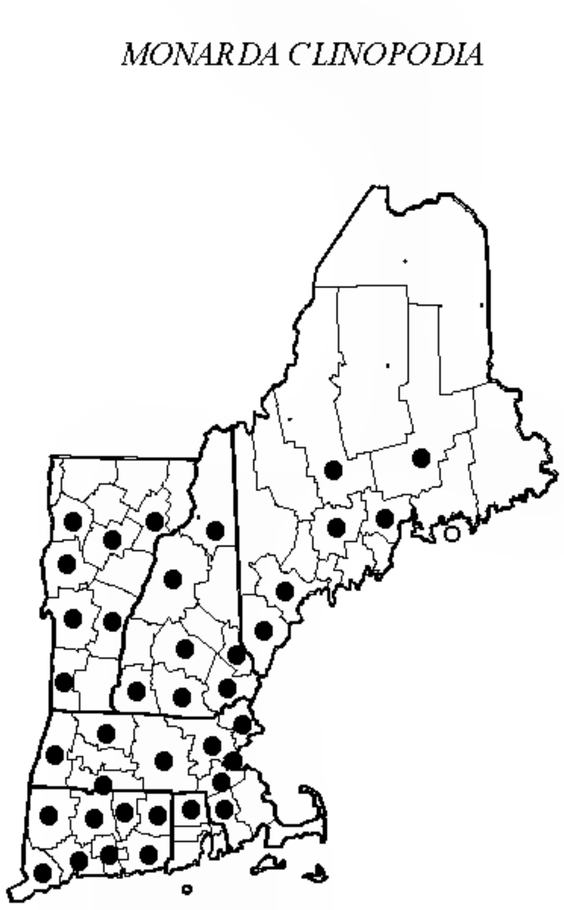
MONARDA CLINOPODIA



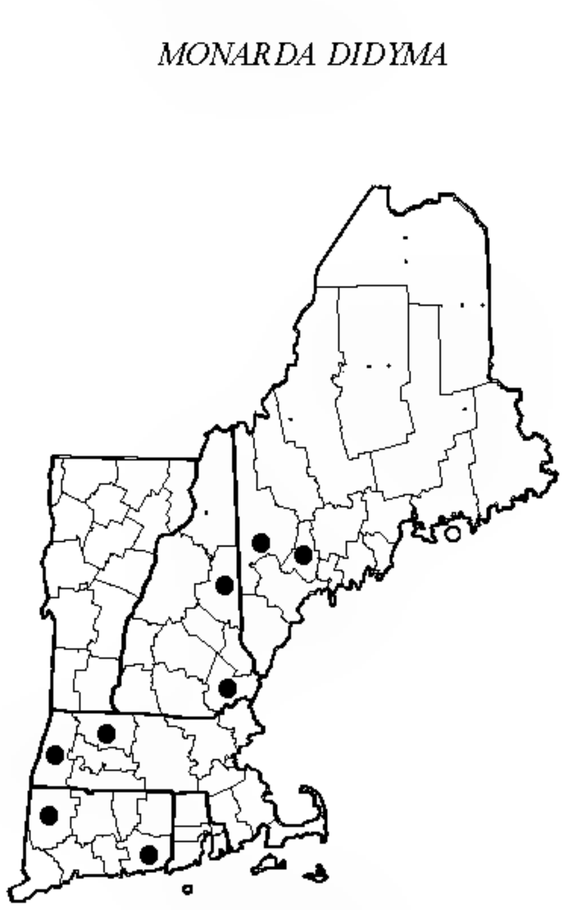
MONARDA DIDYMA



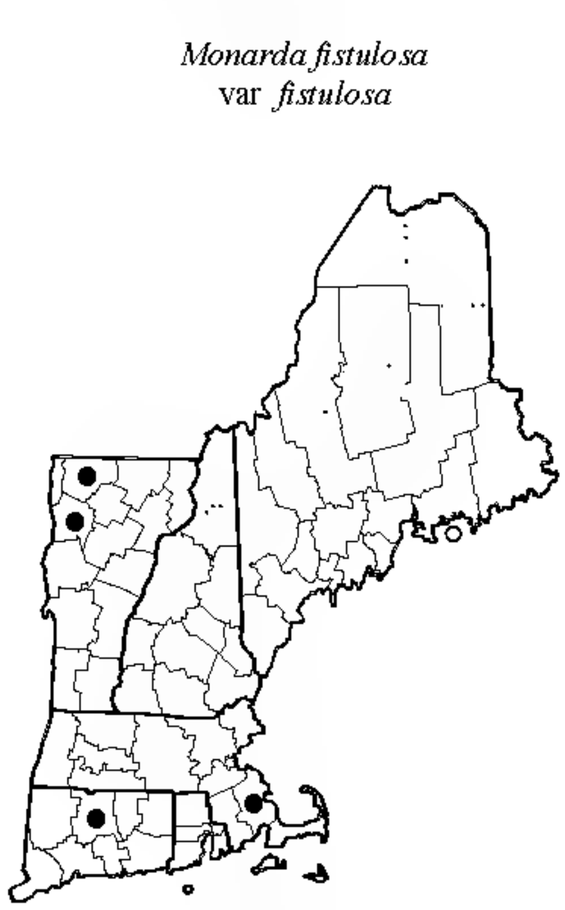
Monarda fistulosa
var *fistulosa*



Monarda fistulosa
var *mollis*

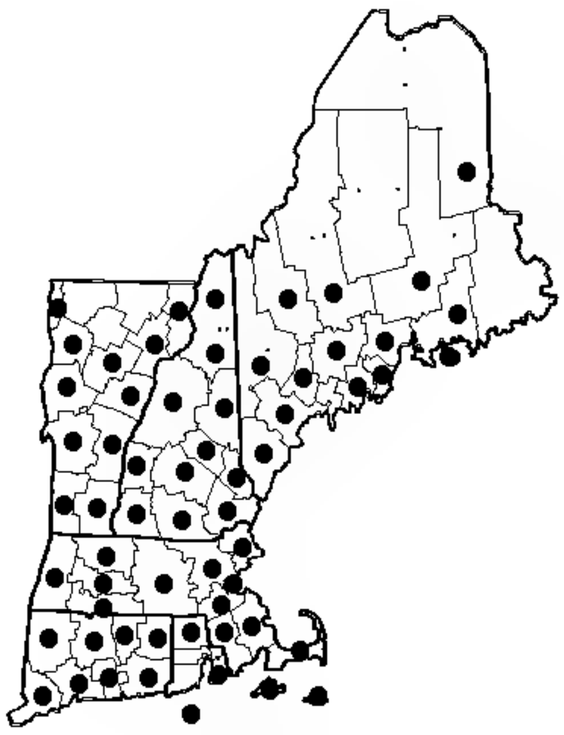


MONARDA MEDIA

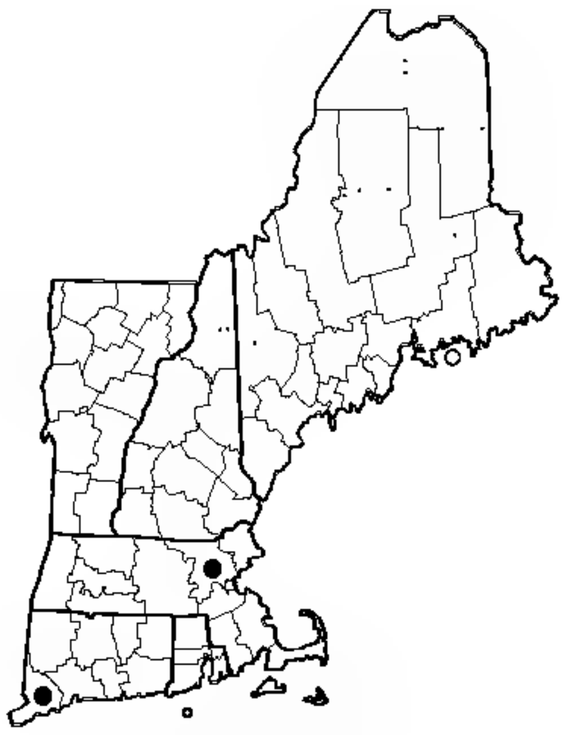


Monarda punctata
var *villicaulis*

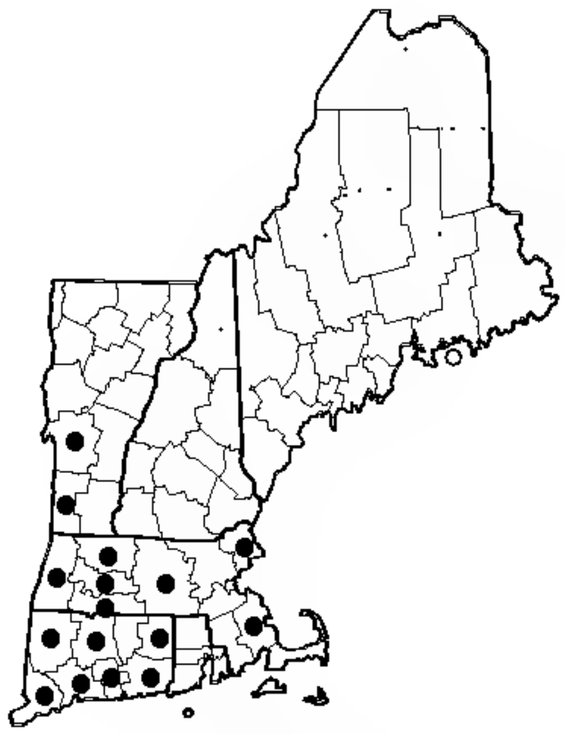
Figure 35 Distribution maps



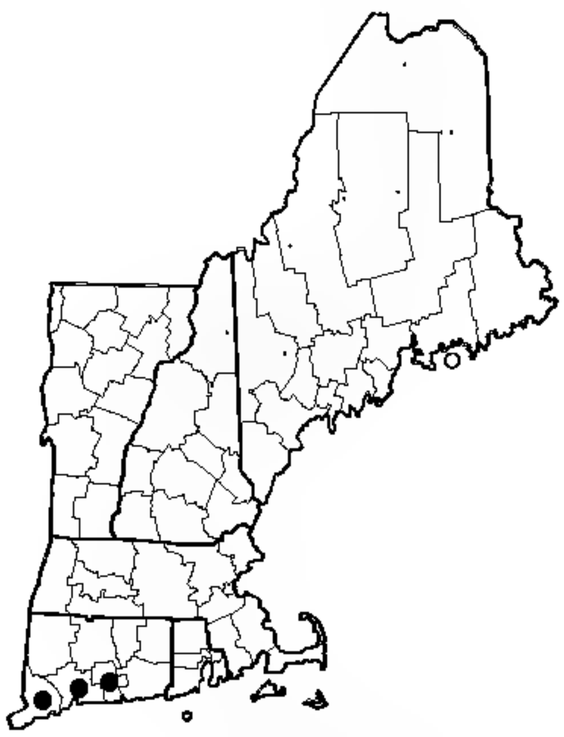
NEPETA CATARIA



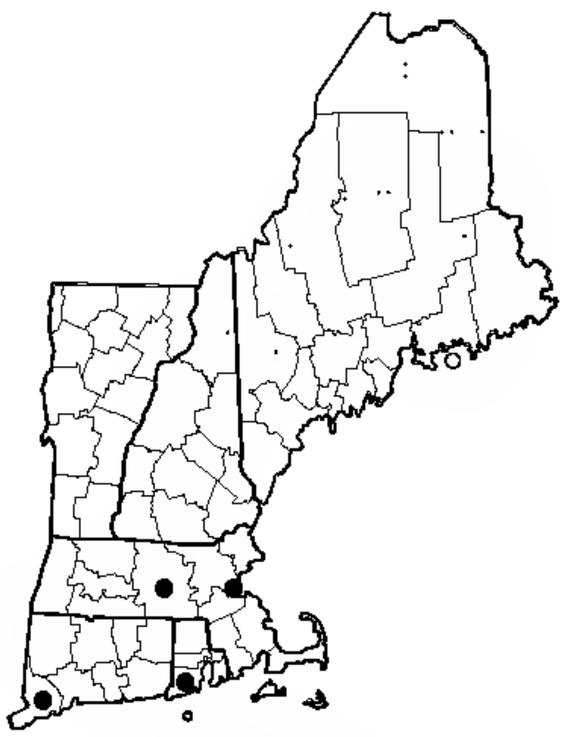
OCIMUM BASILICUM



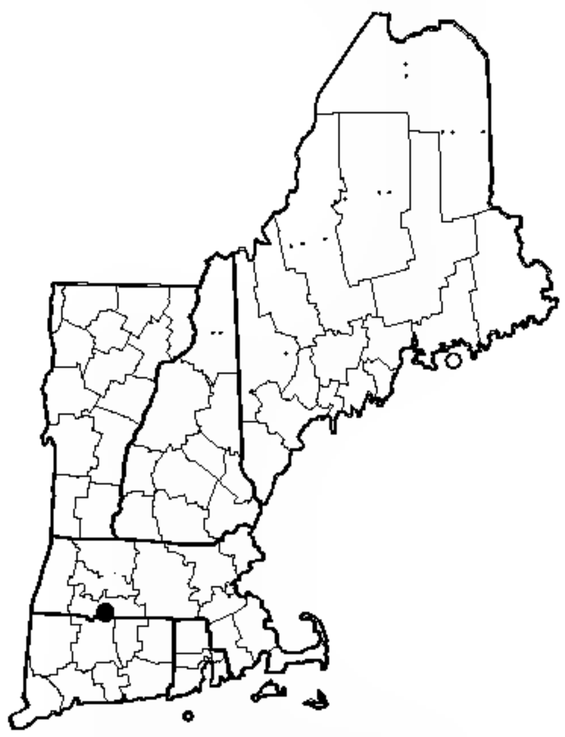
ORIGANUM VULGARE
subsp. *VULGARE*



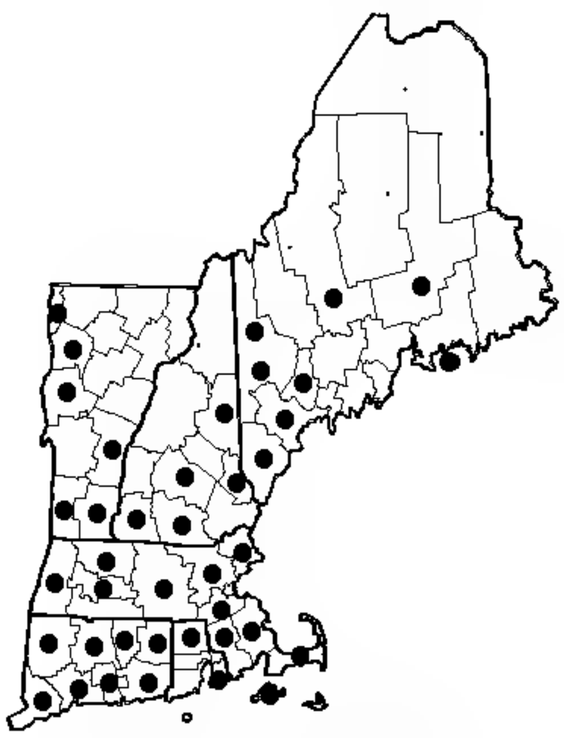
PERILLA FRUTESCENS
var *FRUTESCENS*



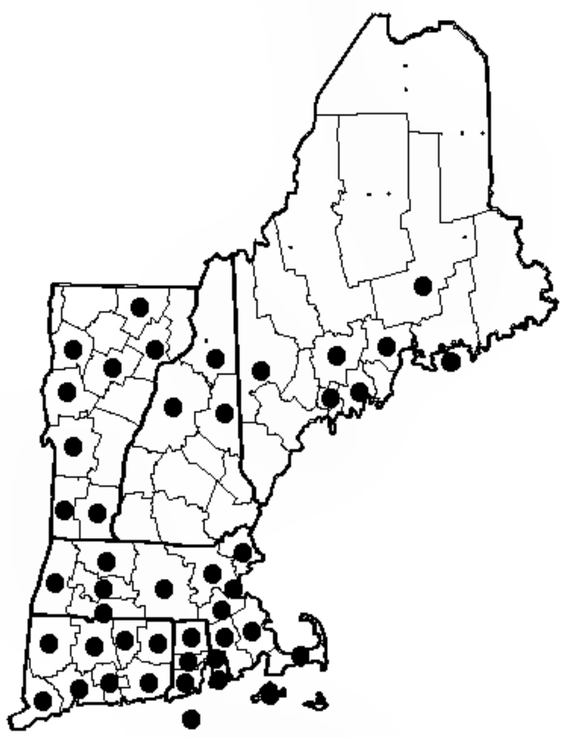
PERILLA FRUTESCENS
var *CRISPA*



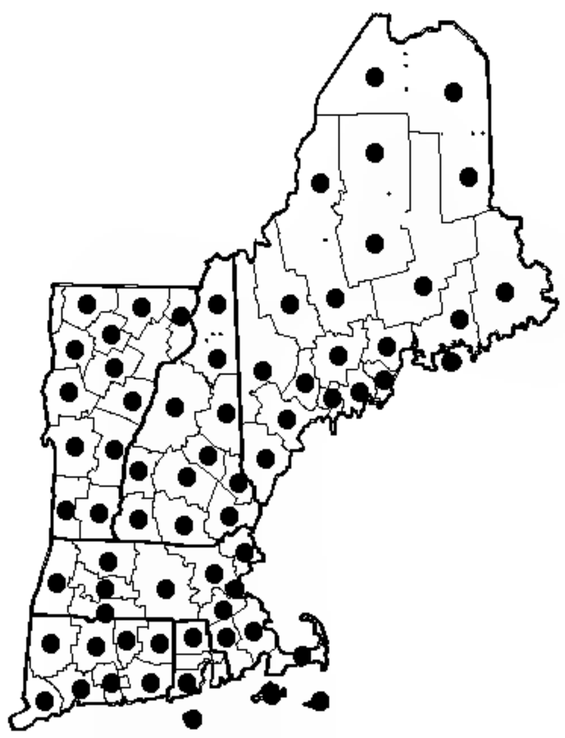
PEROVSKIA ATRICIPLICIFOLIA



Physostegia virginiana
subsp. *virginiana*

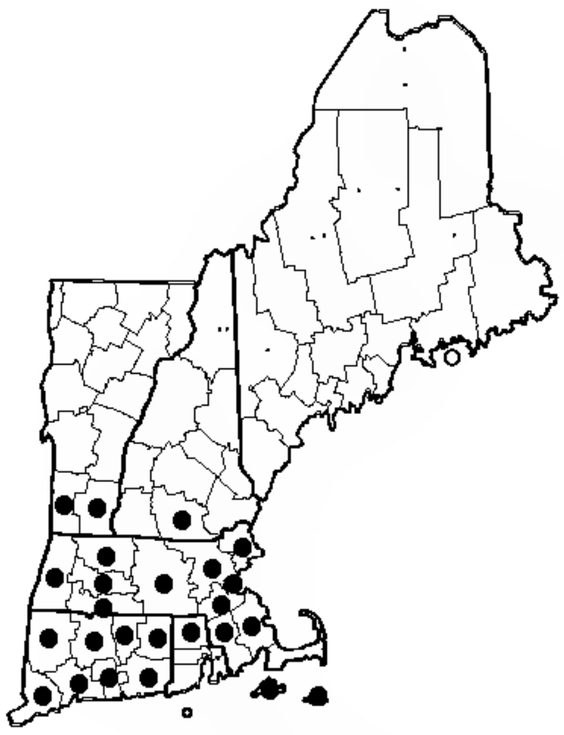


PRUNELLA VULGARIS
subsp. *VULGARIS*

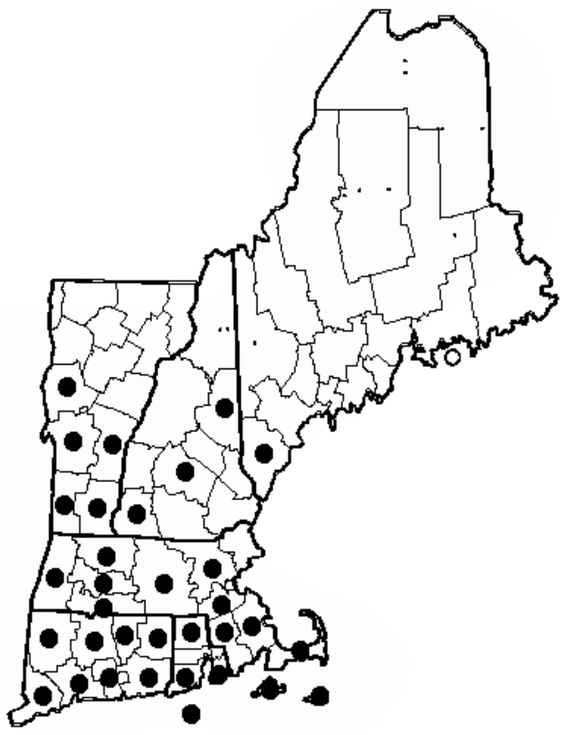


Prunella vulgaris
subsp. *lanceolata*

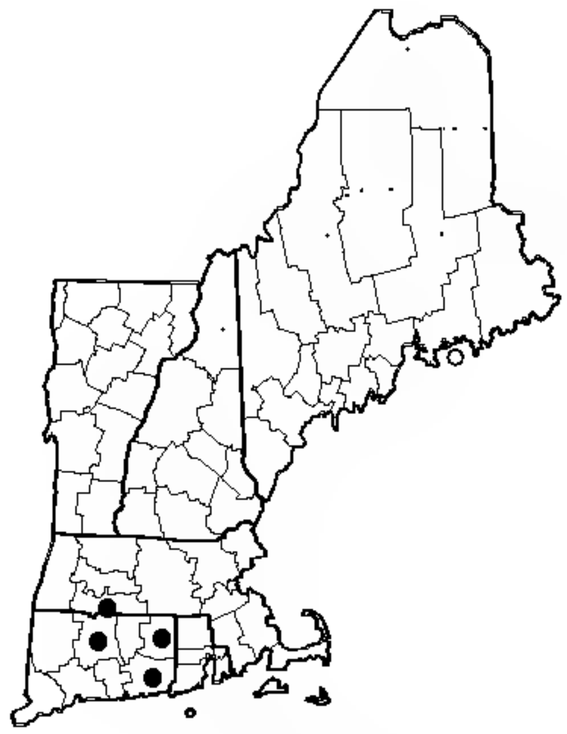
Figure 36 Distribution maps



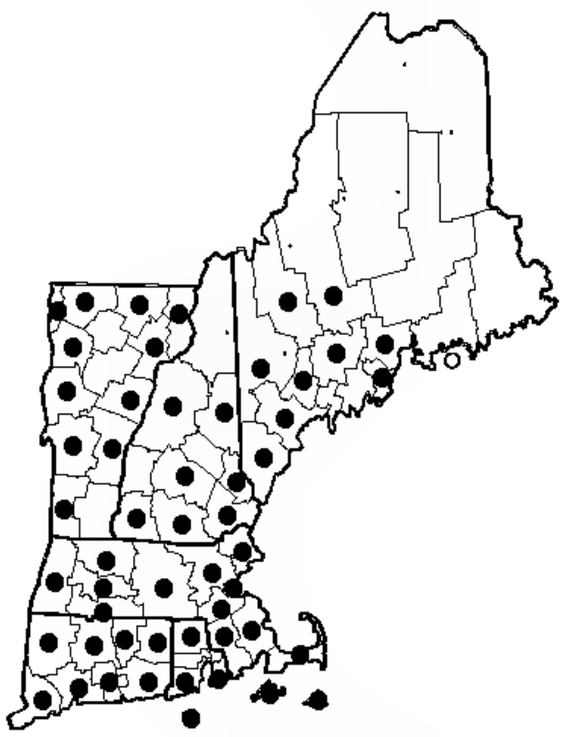
Pycnanthemum incanum
var *incanum*



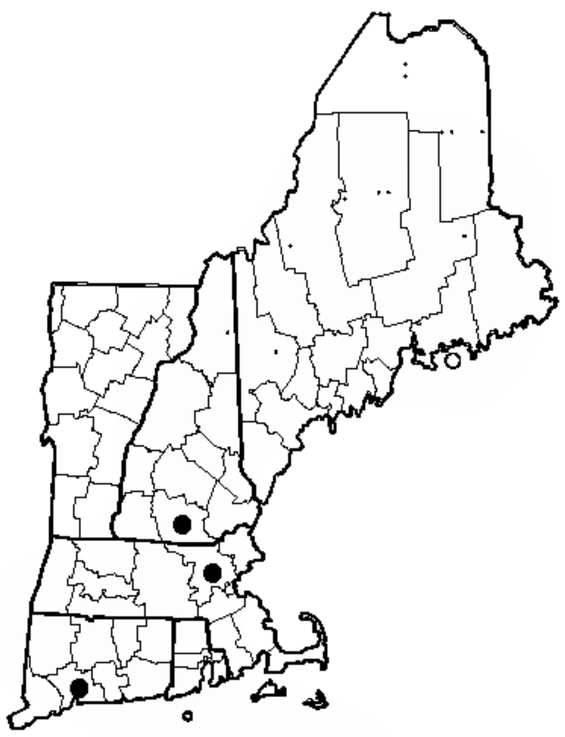
Pycnanthemum muticum



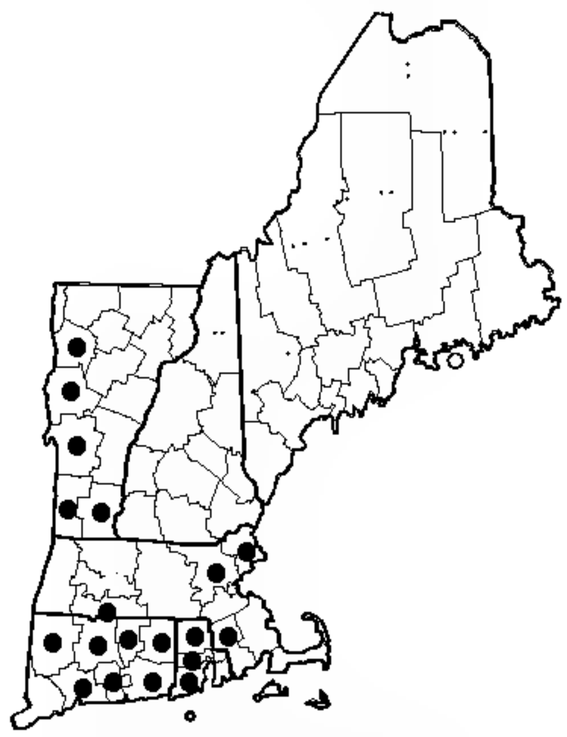
PYCNANTHEMUM PILOSUM



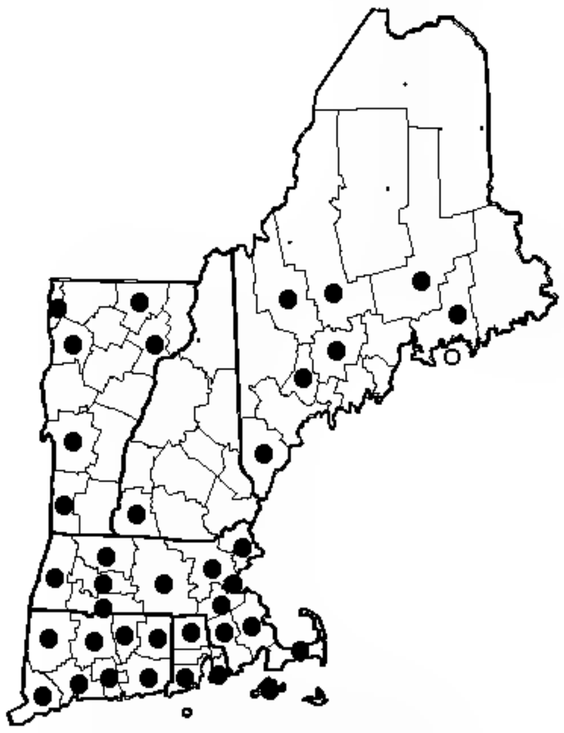
Pycnanthemum tenuifolium



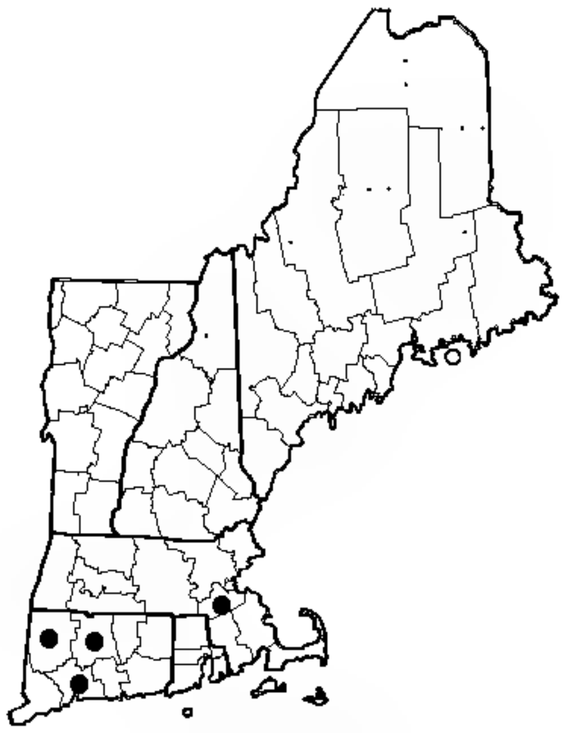
Pycnanthemum torreyi



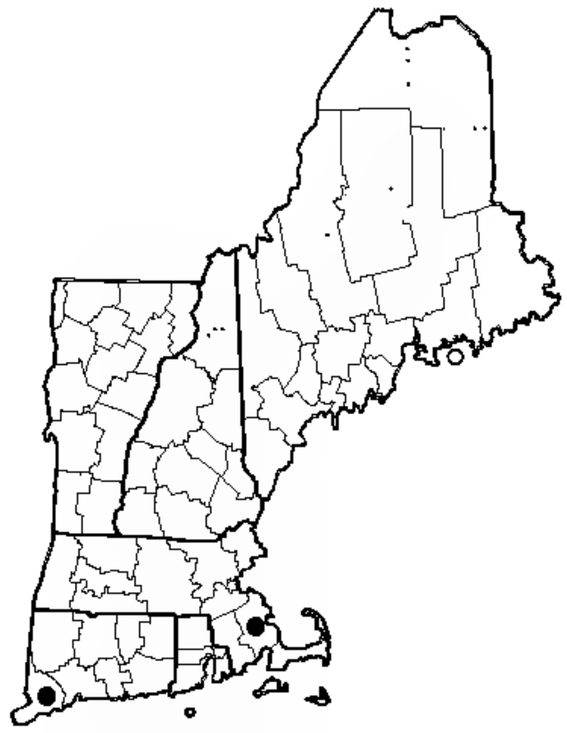
Pycnanthemum verticillatum



Pycnanthemum virginianum

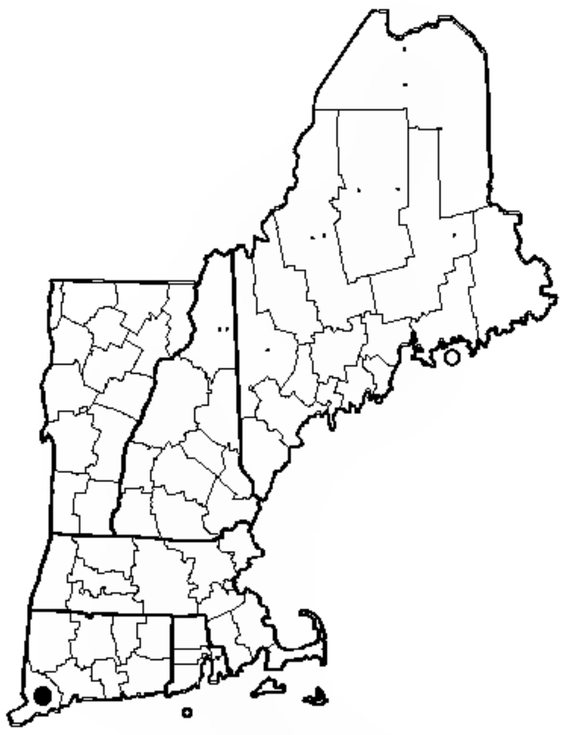


Pycnanthemum X clinopodioides

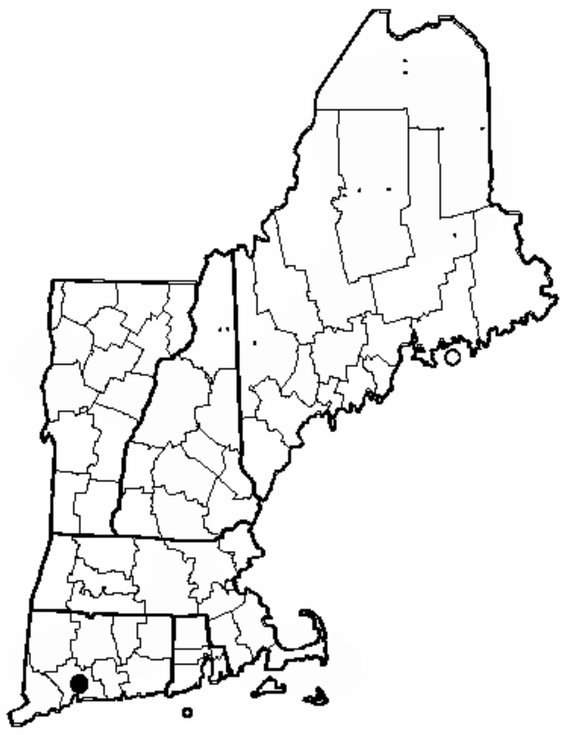


SALVIA AZUREA
var *GRANDIFLORA*

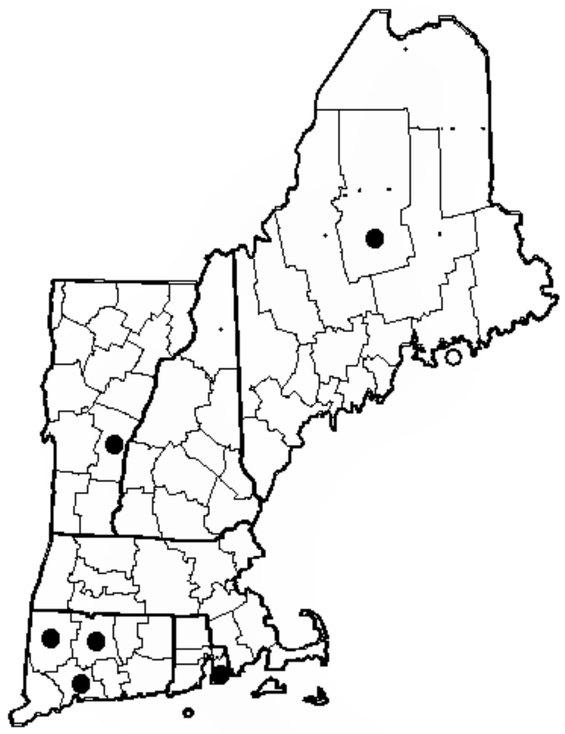
Figure 37 Distribution maps



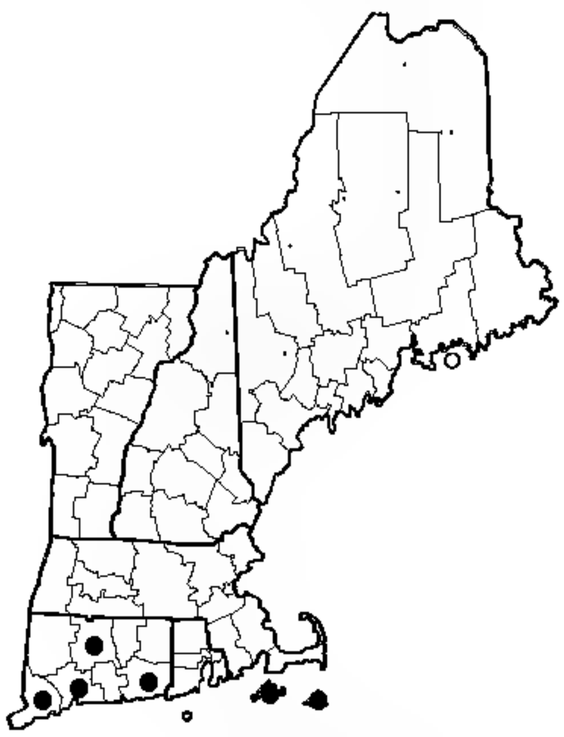
SALVIA FARINACEA



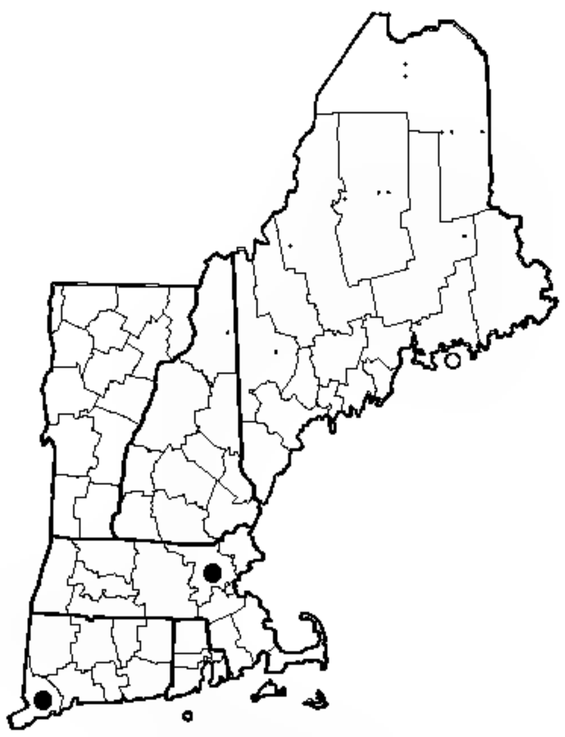
Salvia lyrata



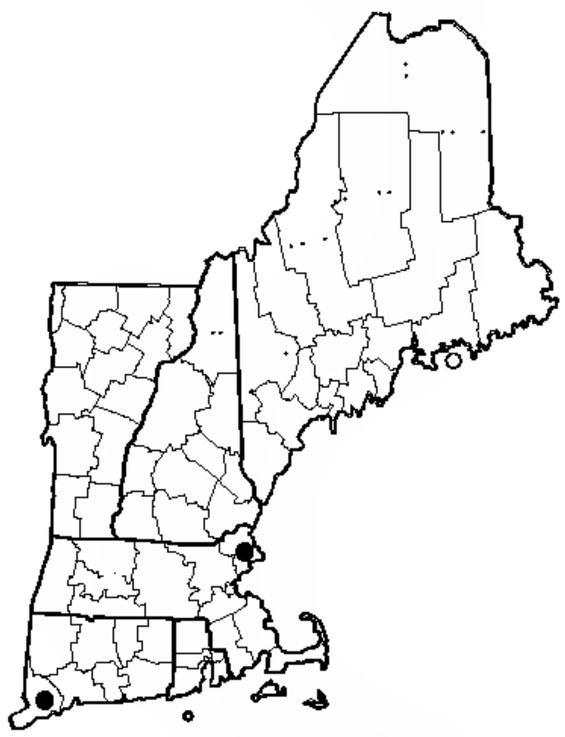
SALVIA OFFICINALIS



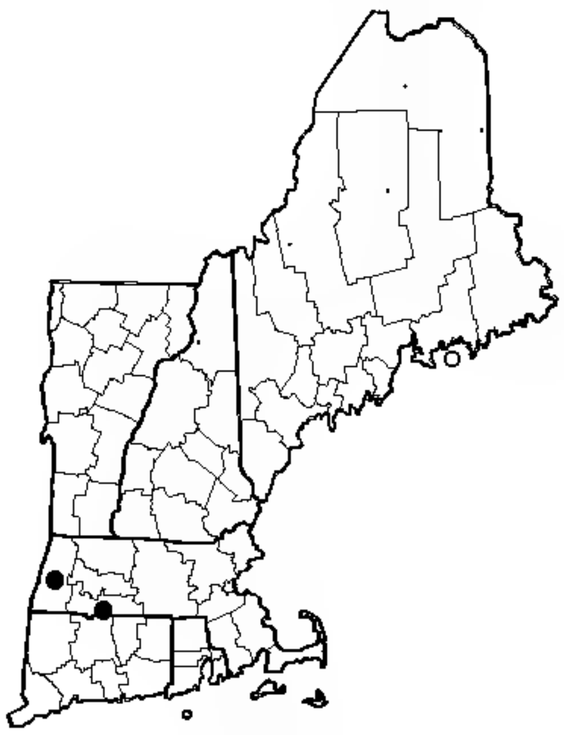
SALVIA PRATENSIS



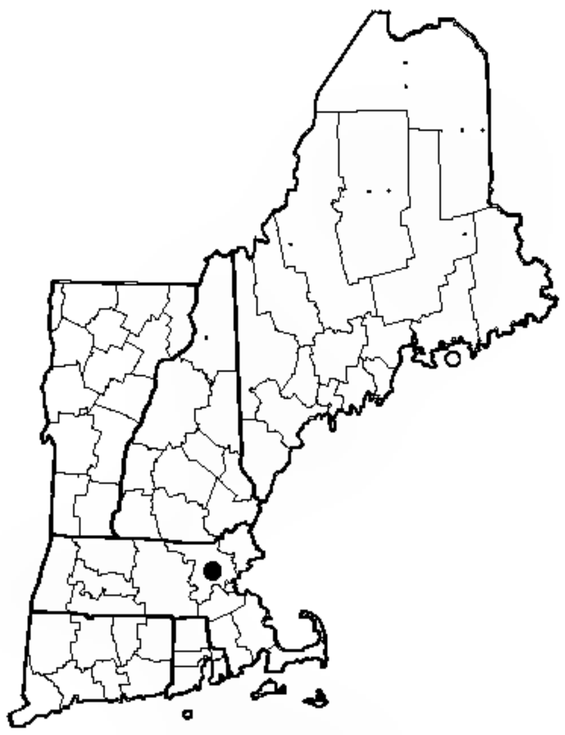
SALVIA SCLAREA



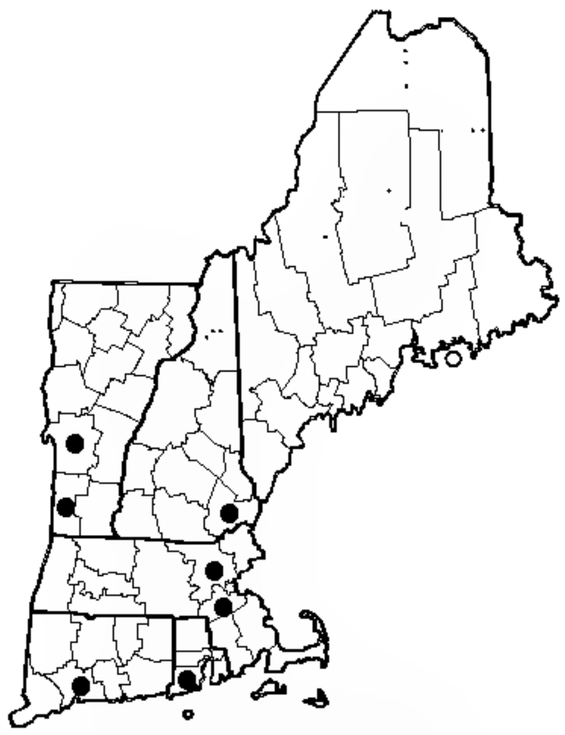
SALVIA SPLENDENS



SALVIA SYLVESTRIS

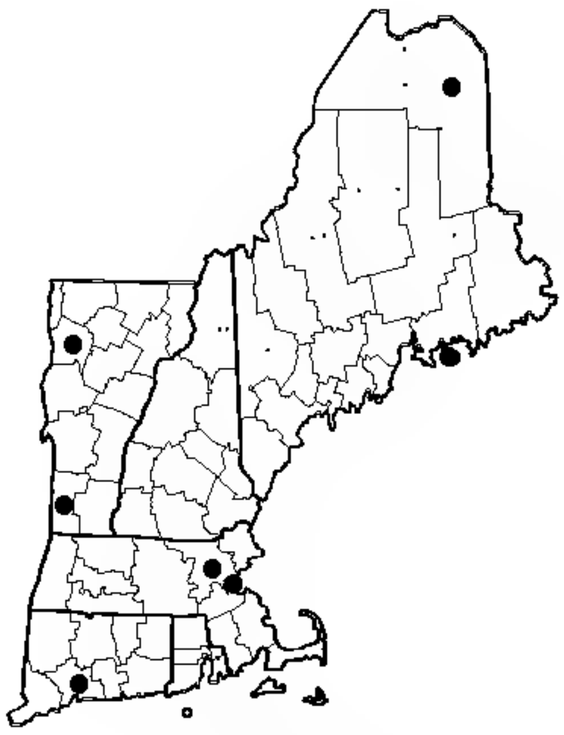


SALVIA TILIIFOLIA

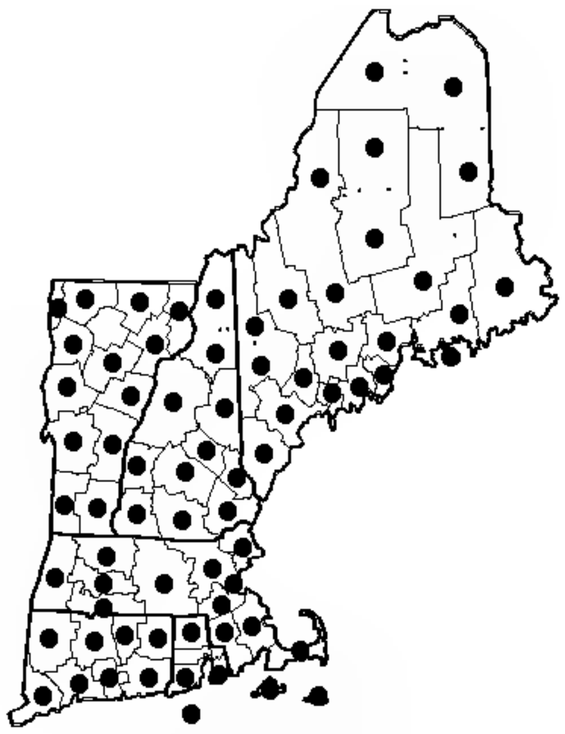


SALVIA VERTICILLATA

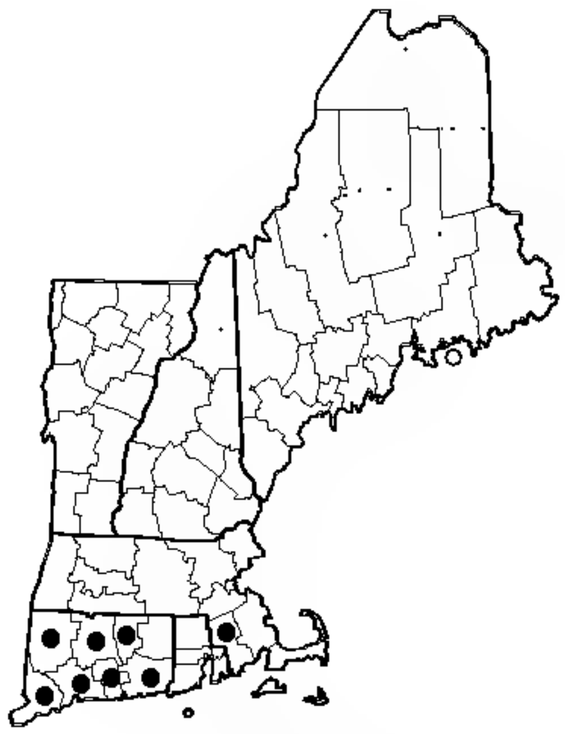
Figure 38 Distribution maps



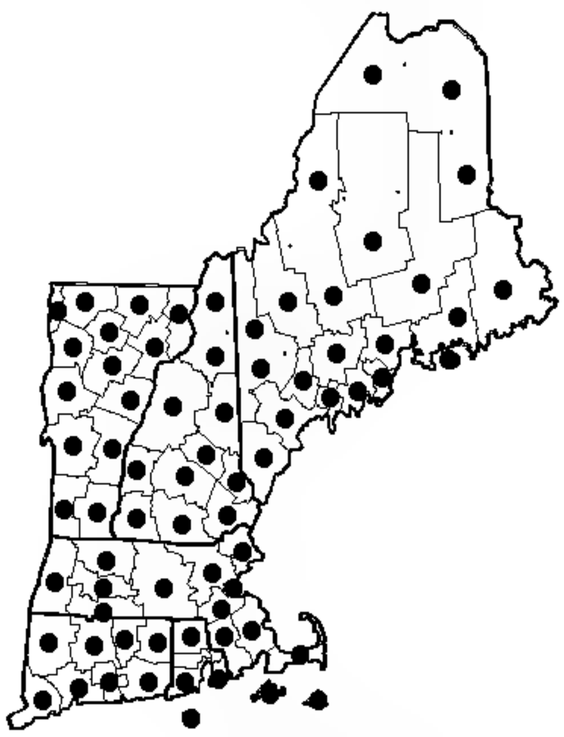
SATUREJA HORTENSIS



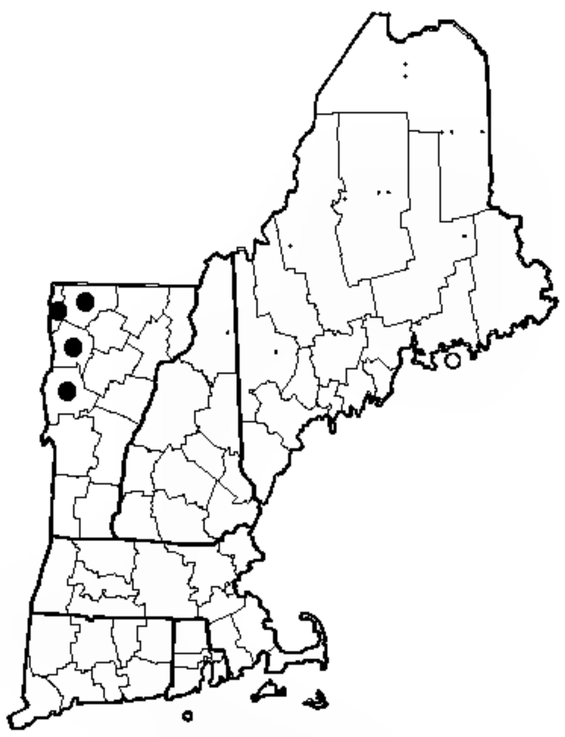
Scutellaria galericulata



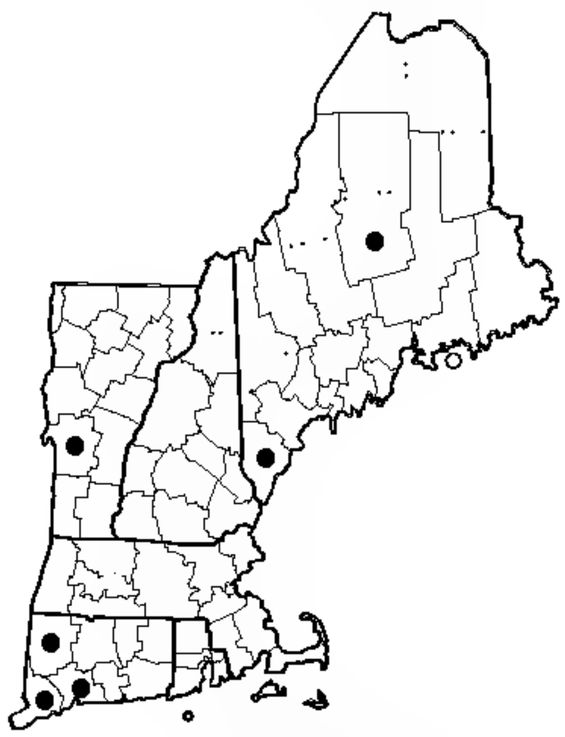
Scutellaria integrifolia



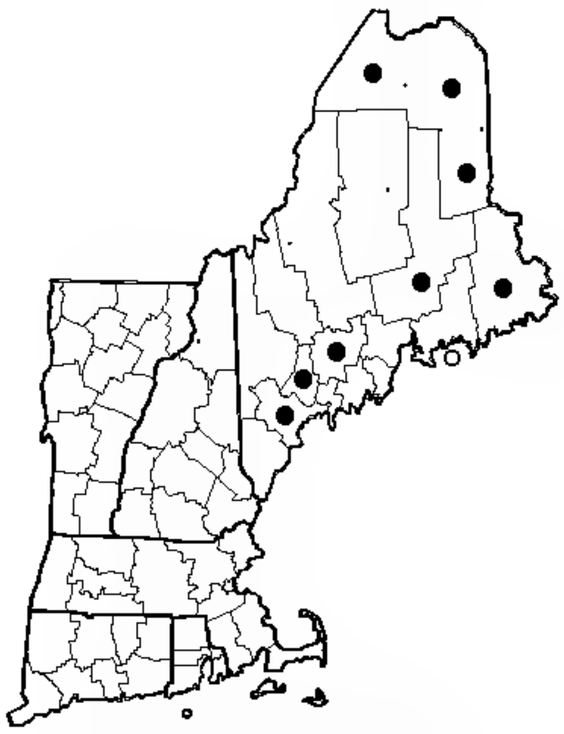
Scutellaria lateriflora
var *lateriflora*



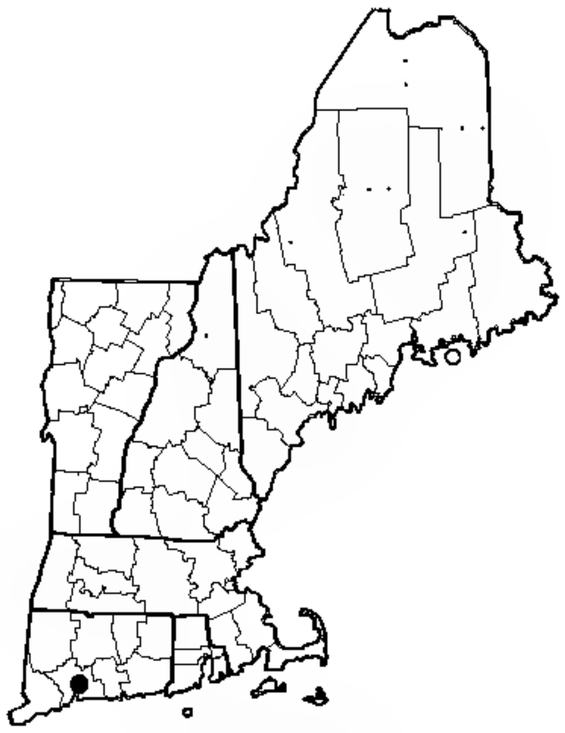
Scutellaria parvula
var *parvula*



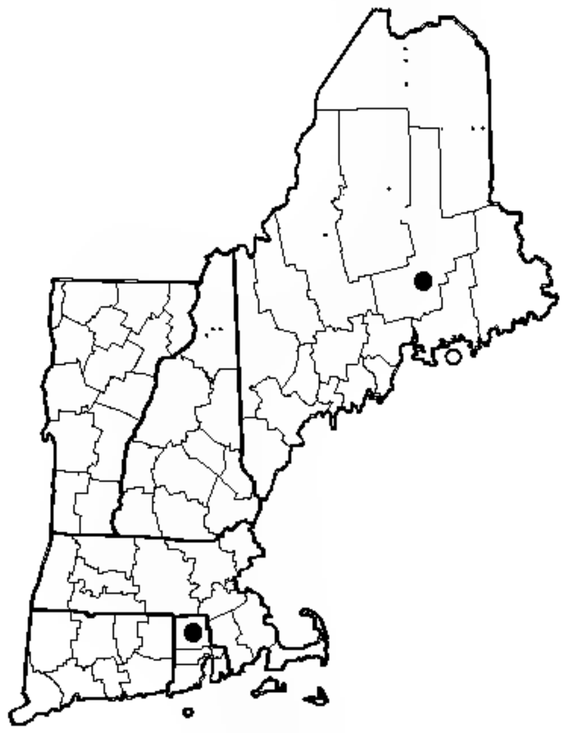
Scutellaria parvula
var *missouriensis*



Scutellaria X churchilliana

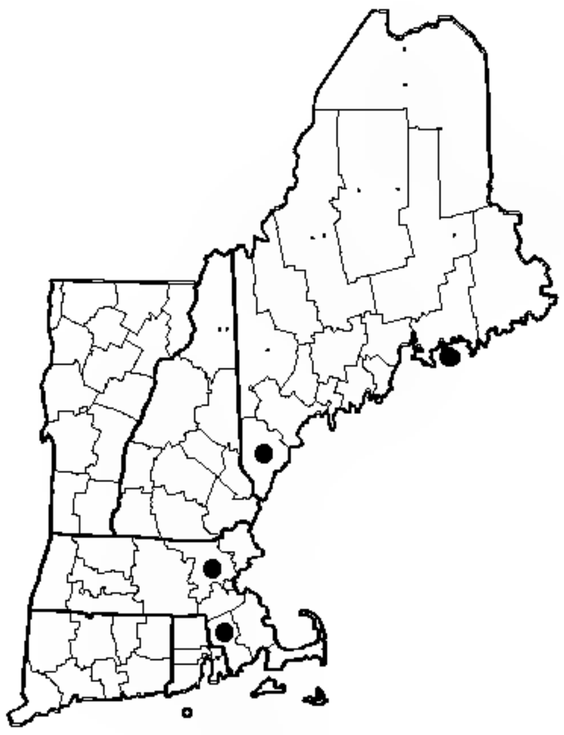


SIDERITIS MONTANA

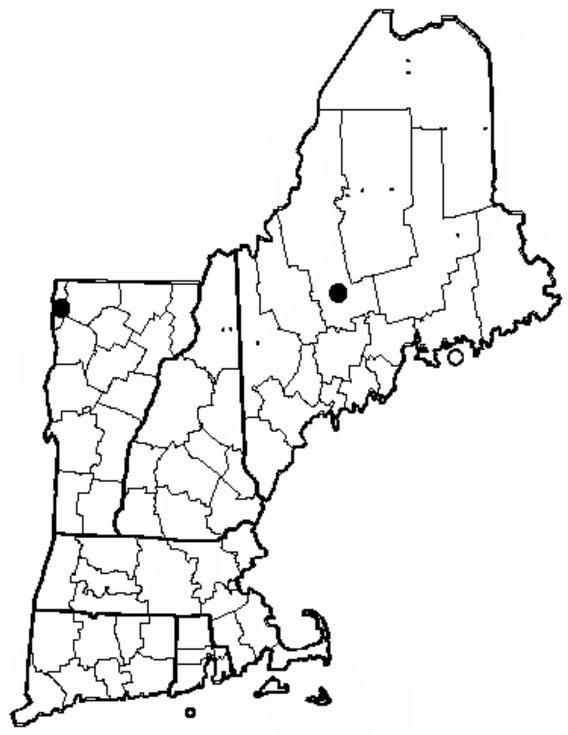


STACHYS ANNUA

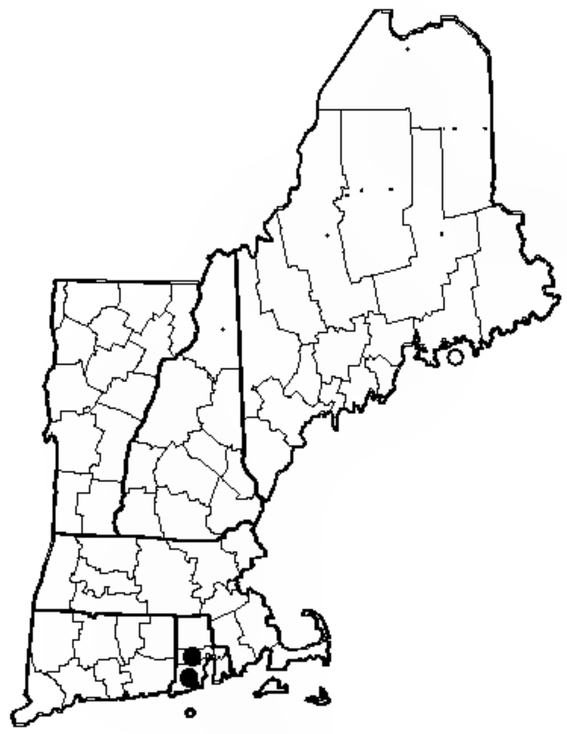
Figure 39 Distribution maps



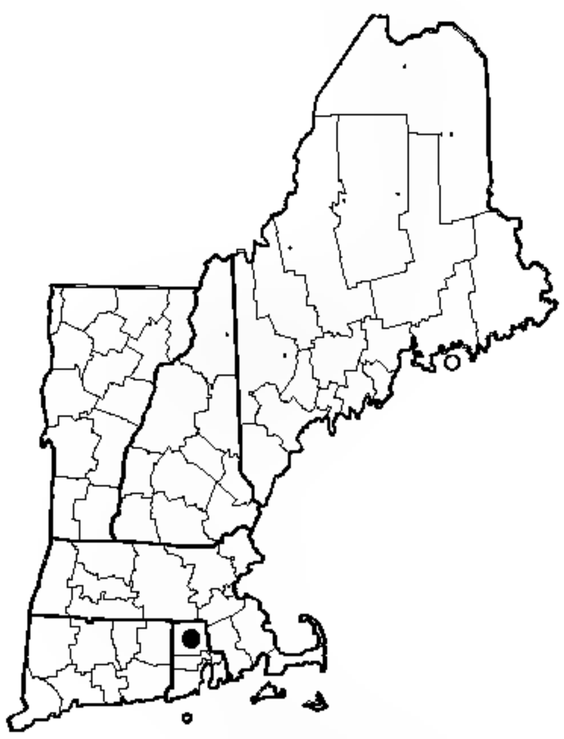
STACHYS ARVENSIS



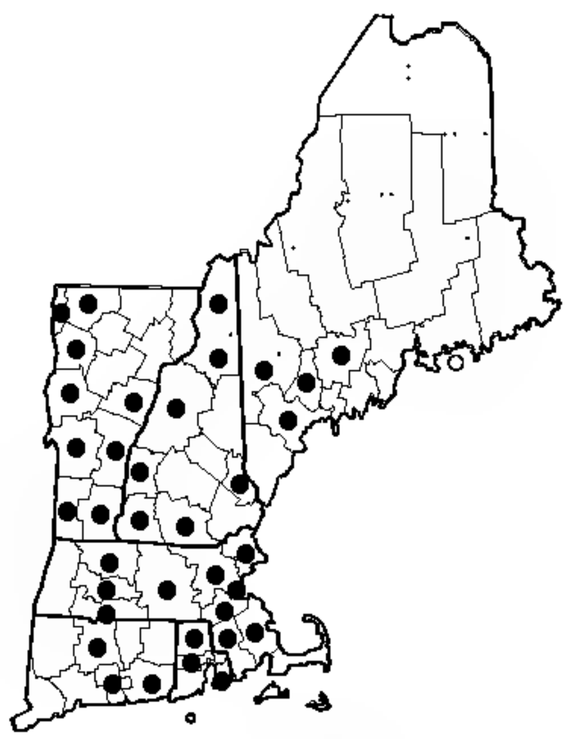
STACHYS ASPERA



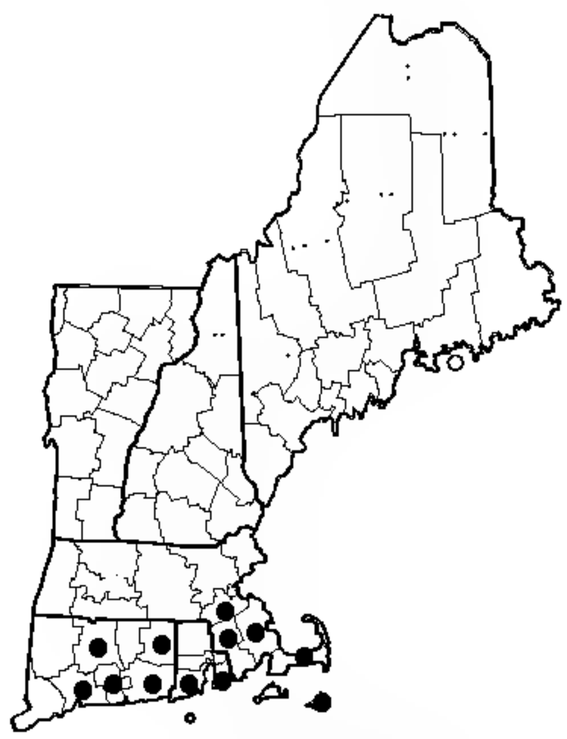
STACHYS BYZANTINA



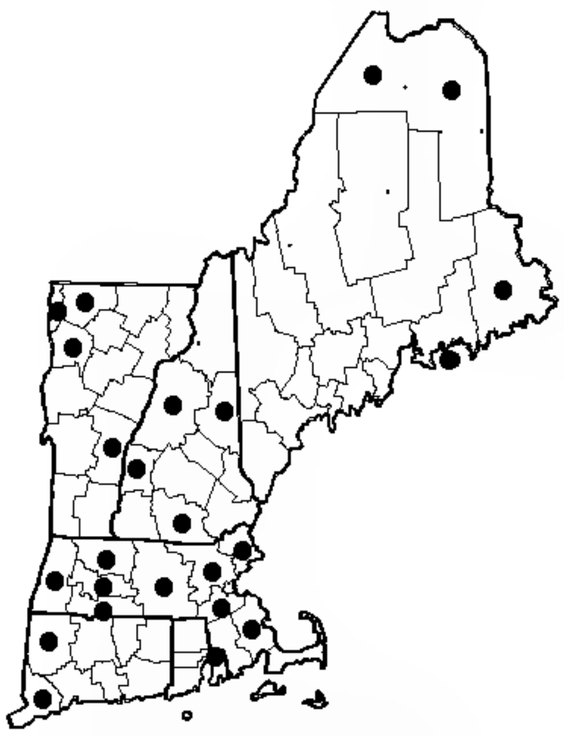
STACHYS GERMANICA



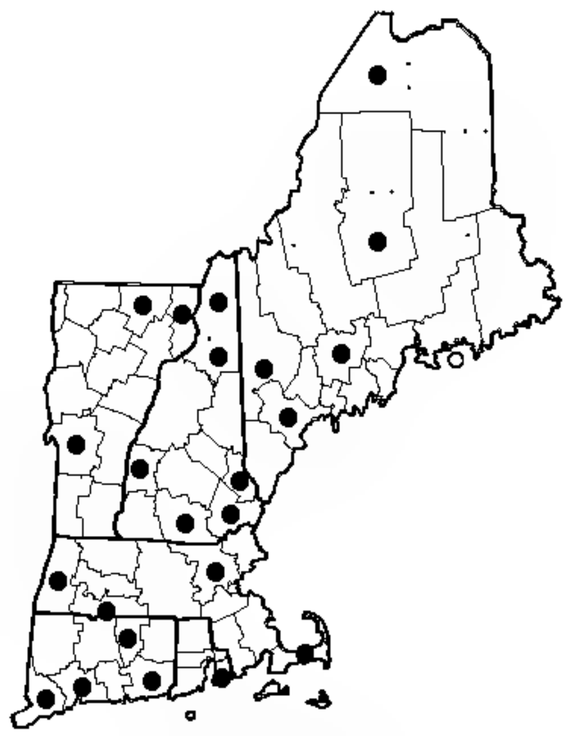
Stachys hispida



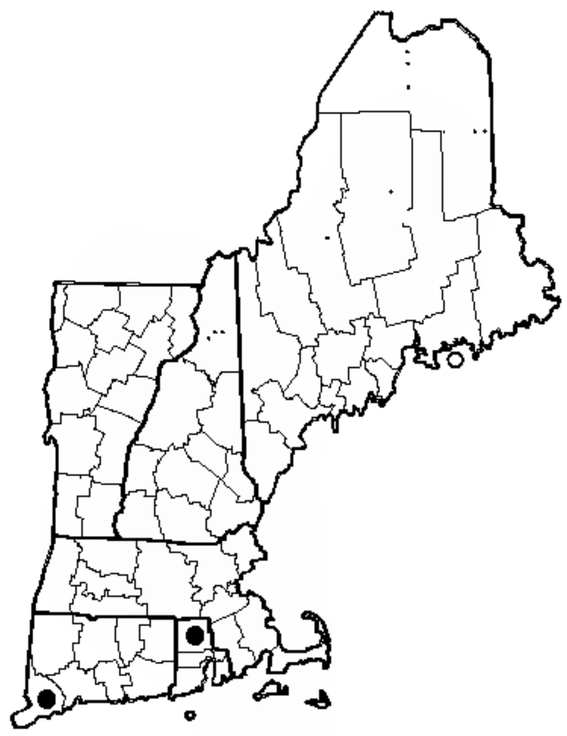
Stachys hyssopifolia



STACHYS PALUSTRIS

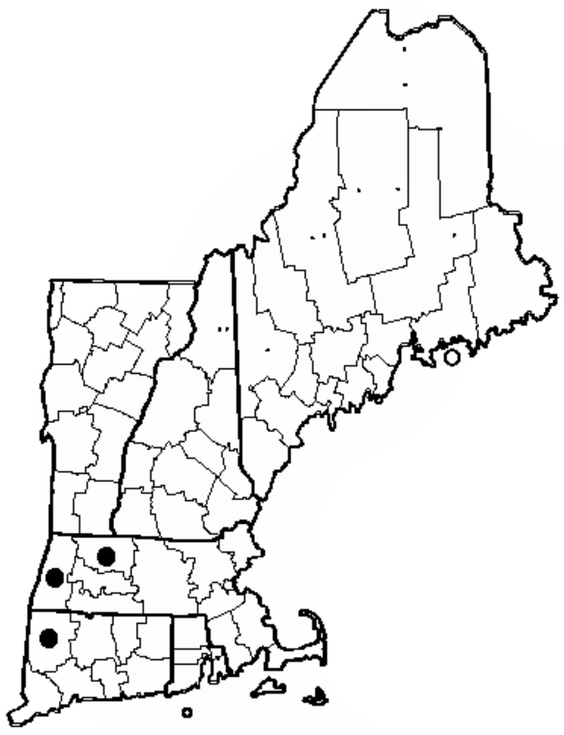


Stachys pilosa
var *pilosa*

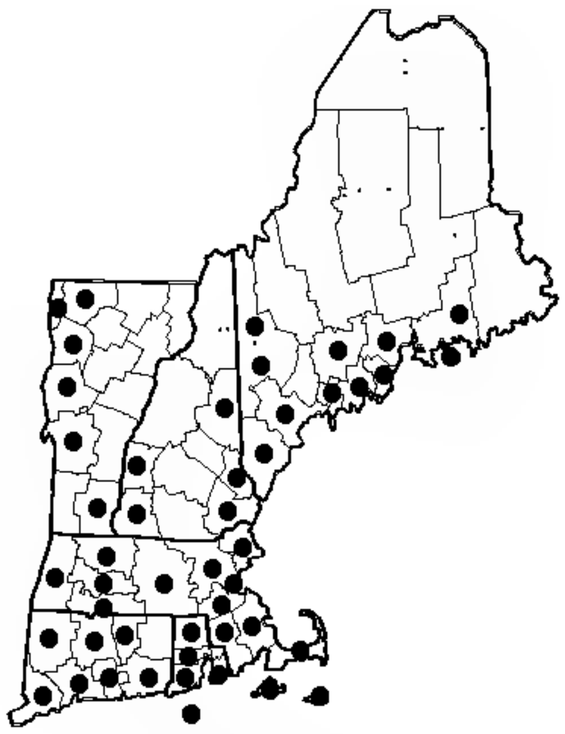


STACHYS PILOSA
var *ARENICOLA*

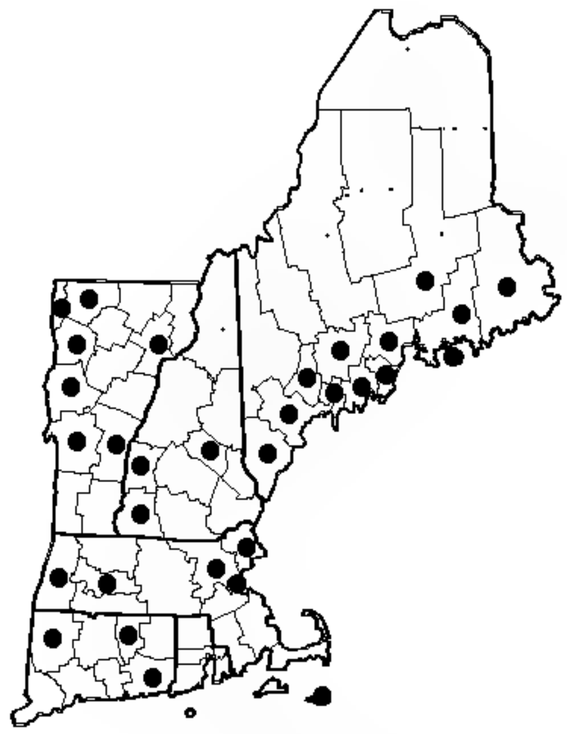
Figure 40 Distribution maps



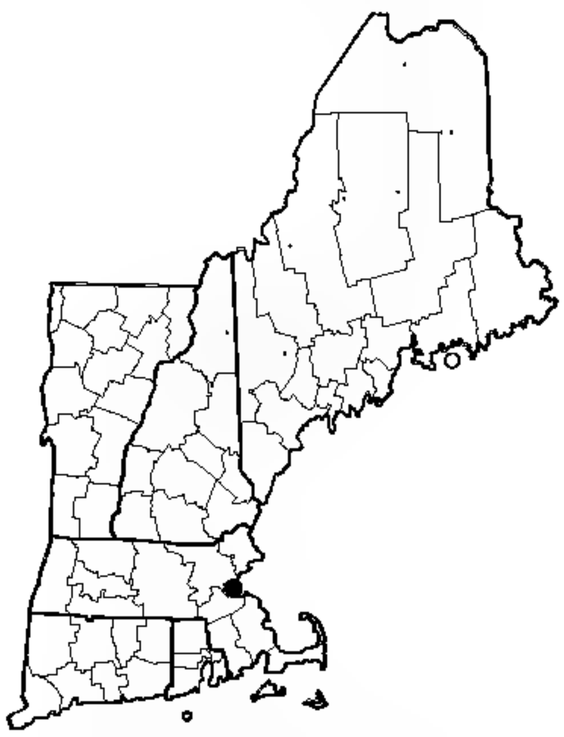
TEUCRIUM BOTRYS



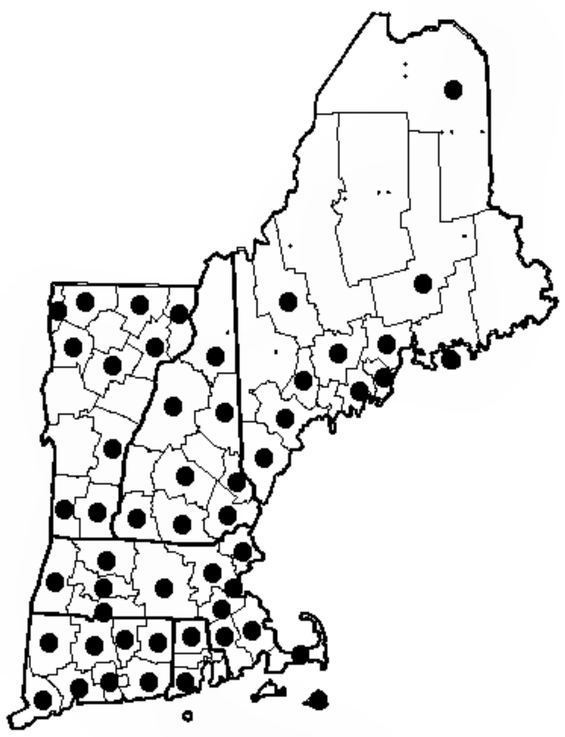
Teucrium canadense
var *canadense*



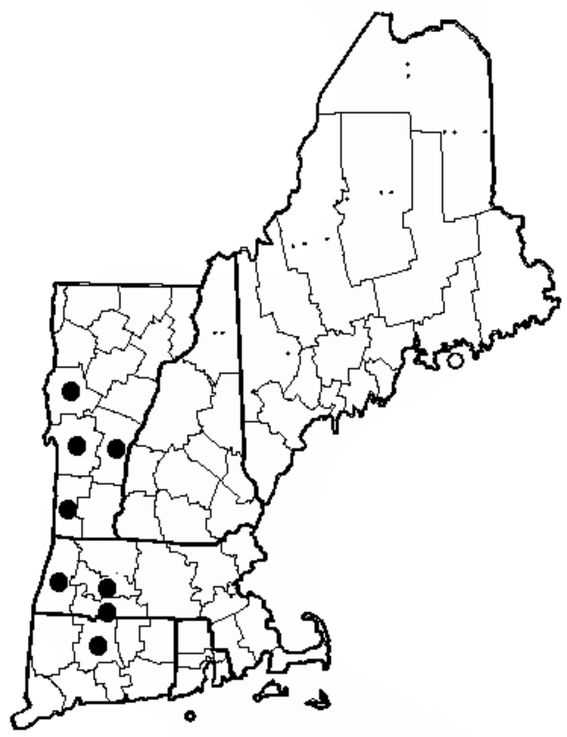
Teucrium canadense
var *occidentale*



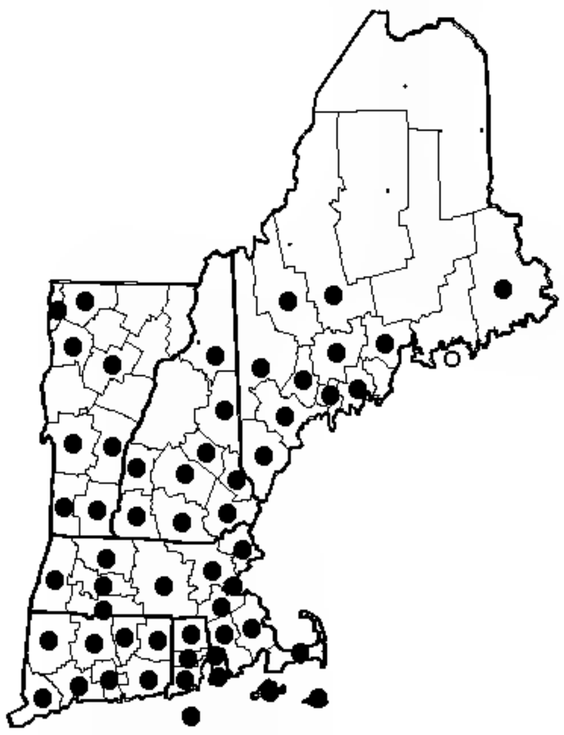
TEUCRIUM SCORODONIA



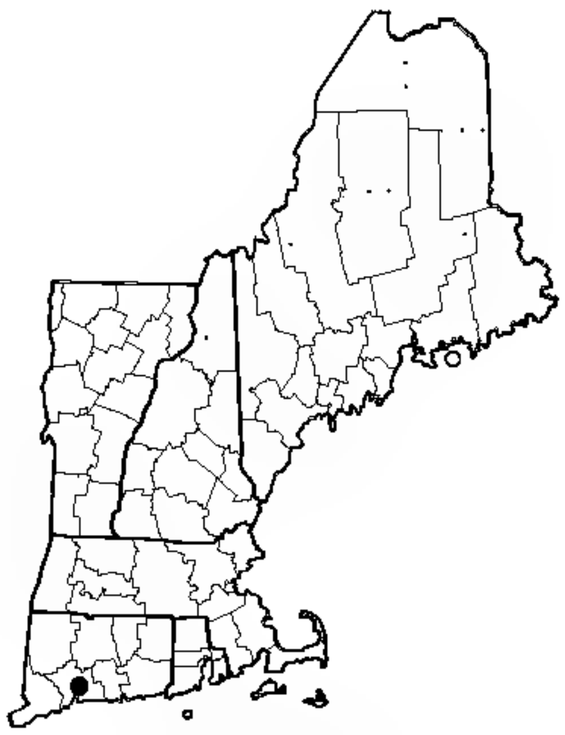
THYMUS PULEGIOIDES



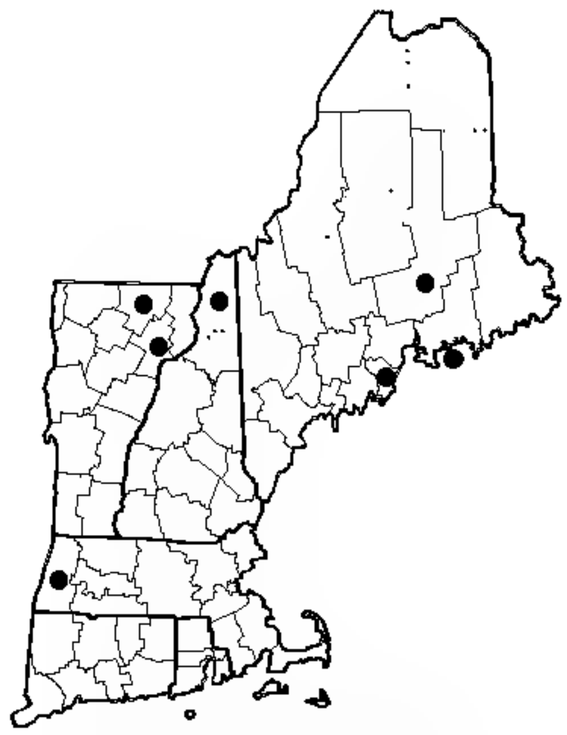
Trichostema brachiatum



Trichostema dichotomum

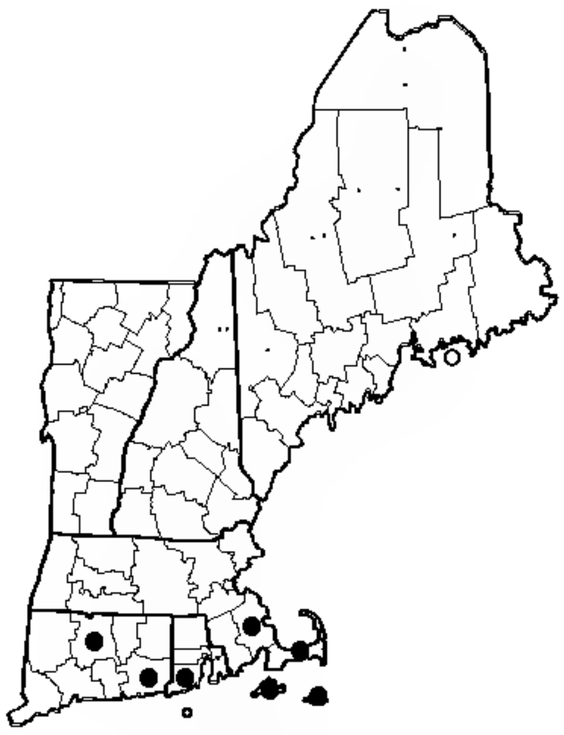


Trichostema setaceum

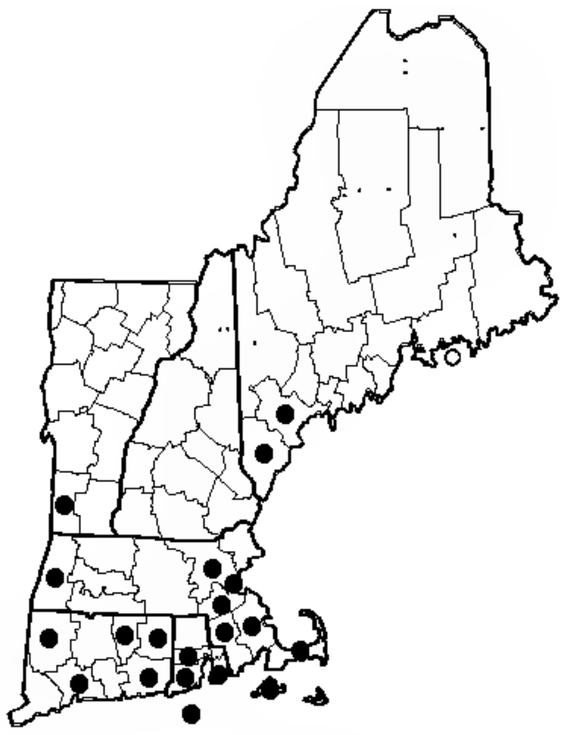


LINUM CATHARTICUM

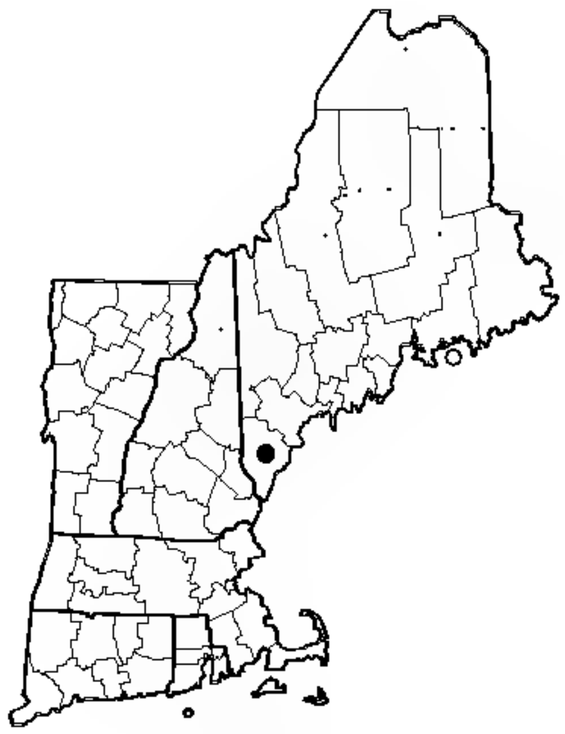
Figure 41 Distribution maps



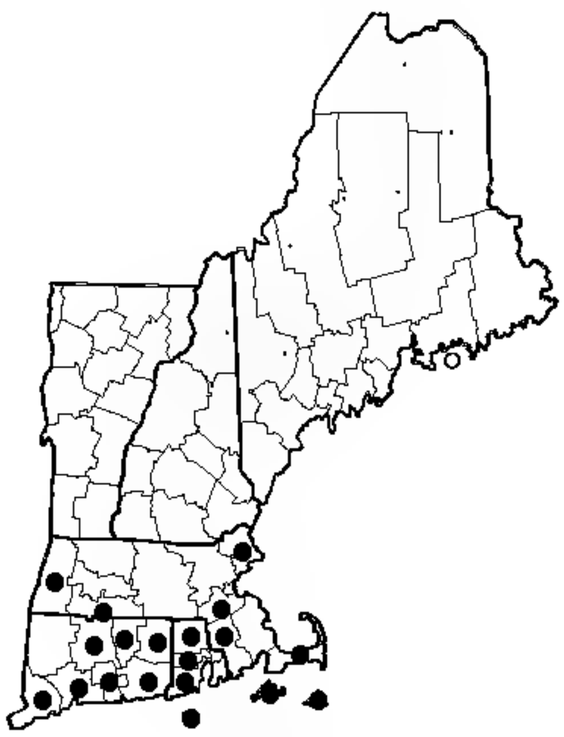
Linum intercursum



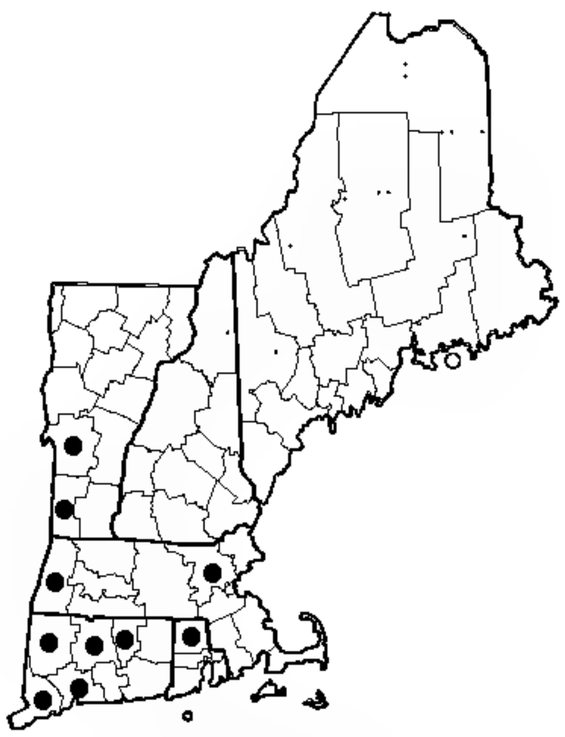
Linum medium
var *texanum*



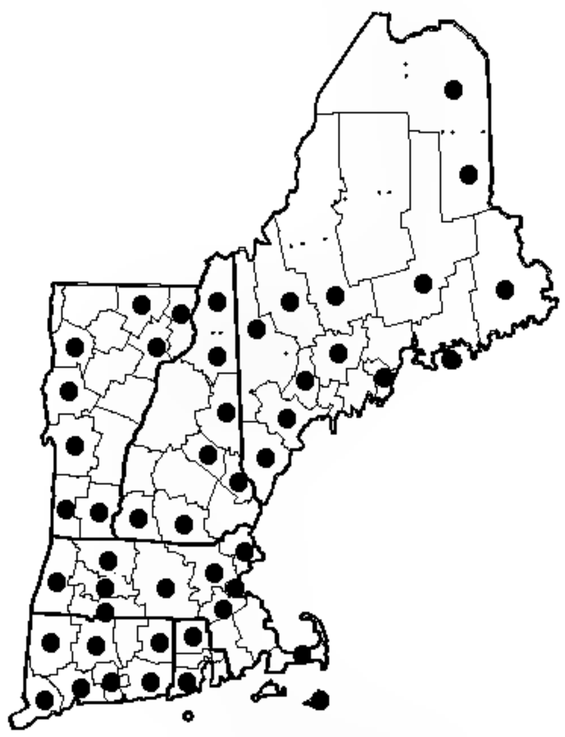
LINUM PERENNE



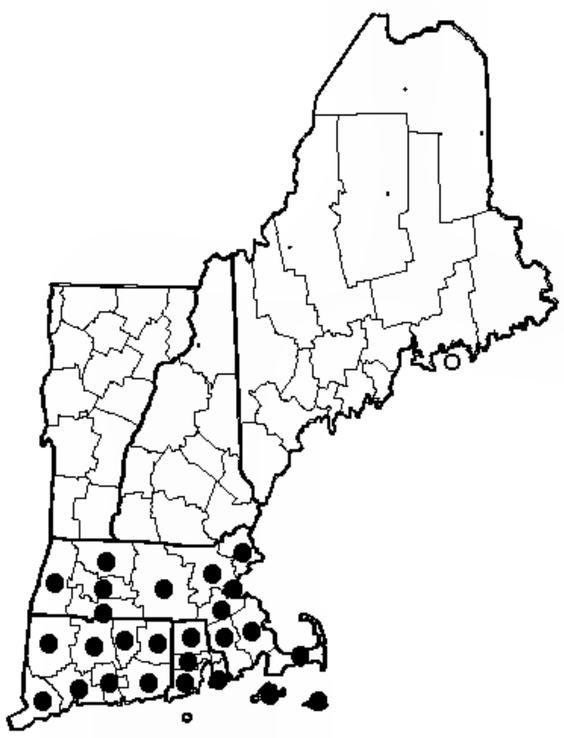
Linum striatum



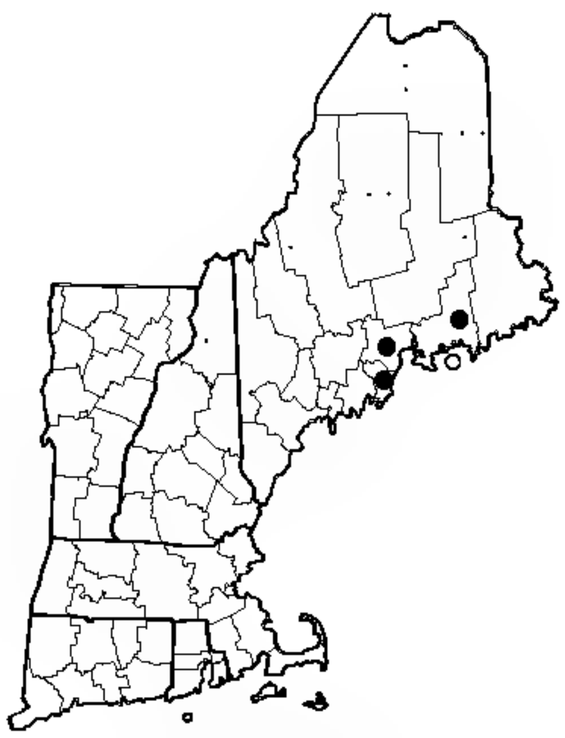
Linum sulcatum



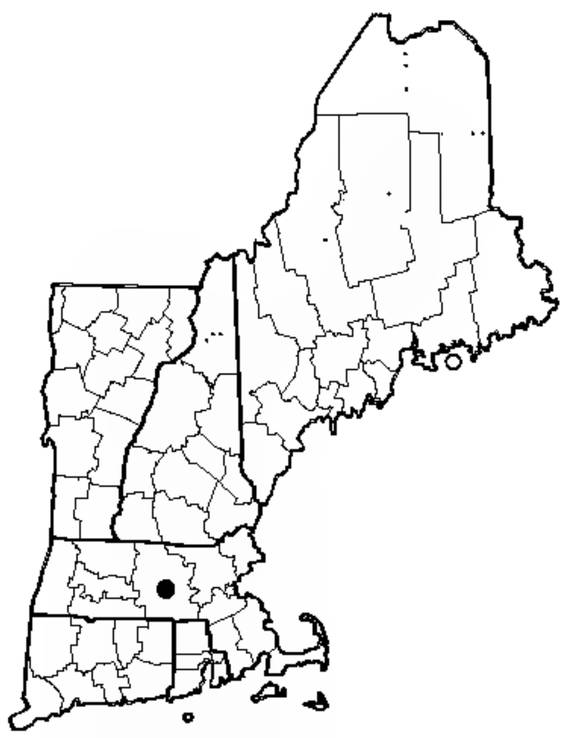
LINUM USITATISSIMUM



Linum virginianum

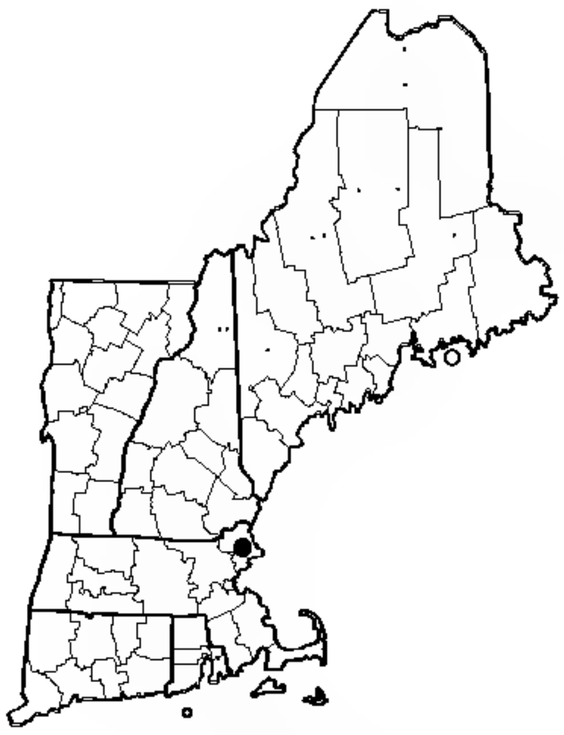


RADIOLA LINOIDES

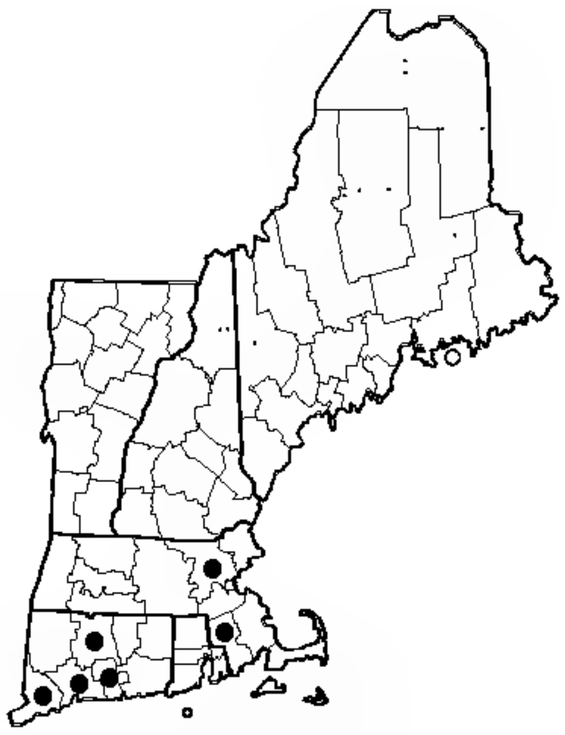


MENTZELIA OLIGOSPERMA

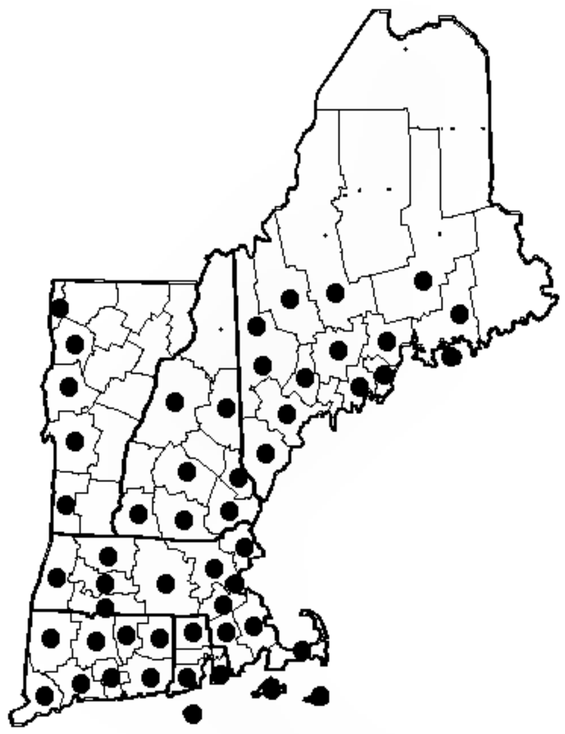
Figure 42 Distribution maps



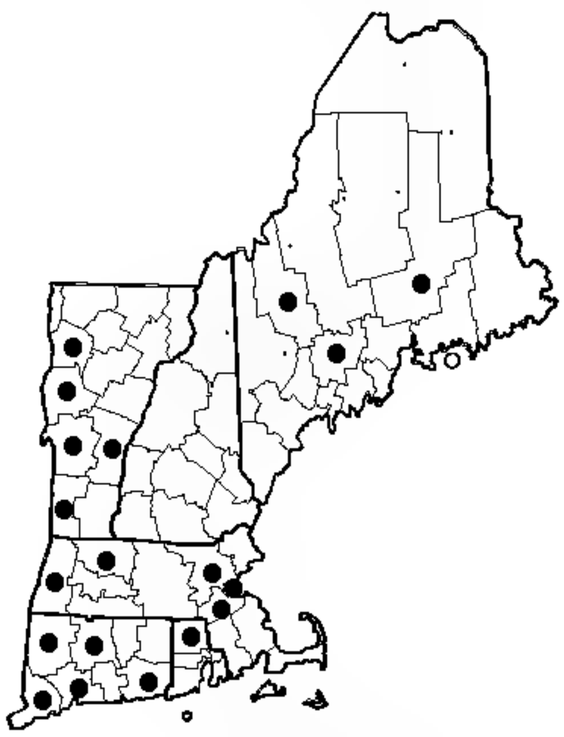
CUPHEA PROCUMBENS



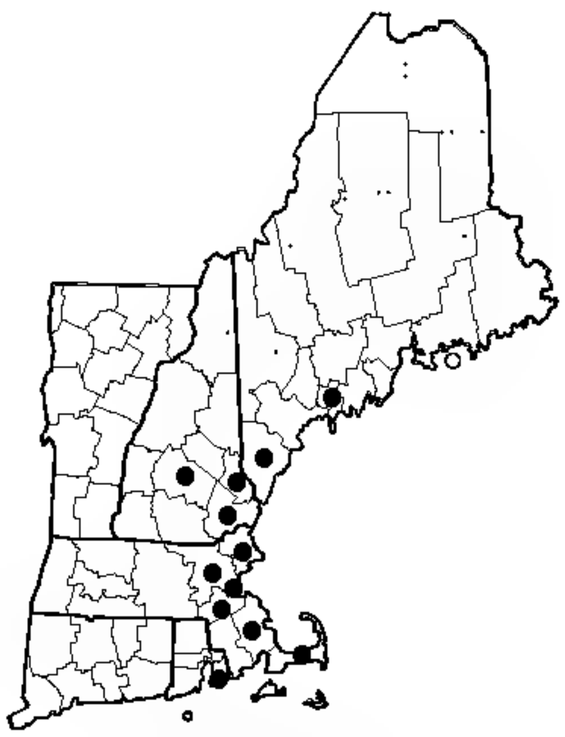
Cuphea viscosissima



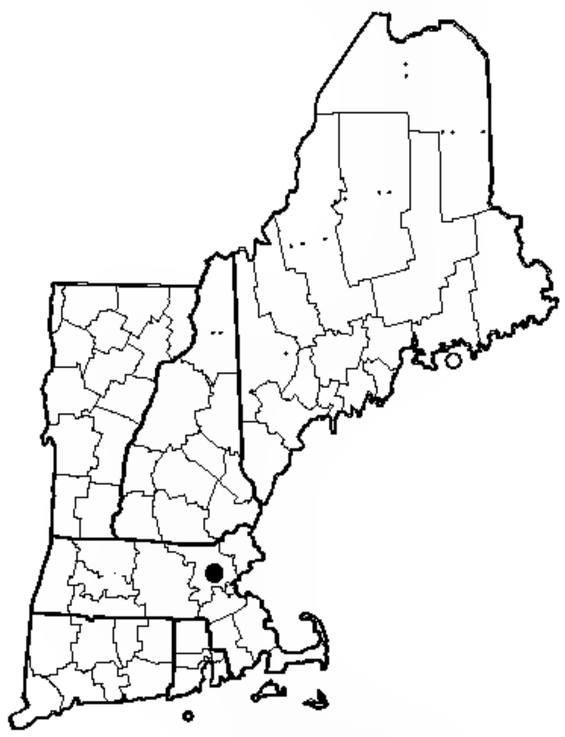
Decodon verticillatus



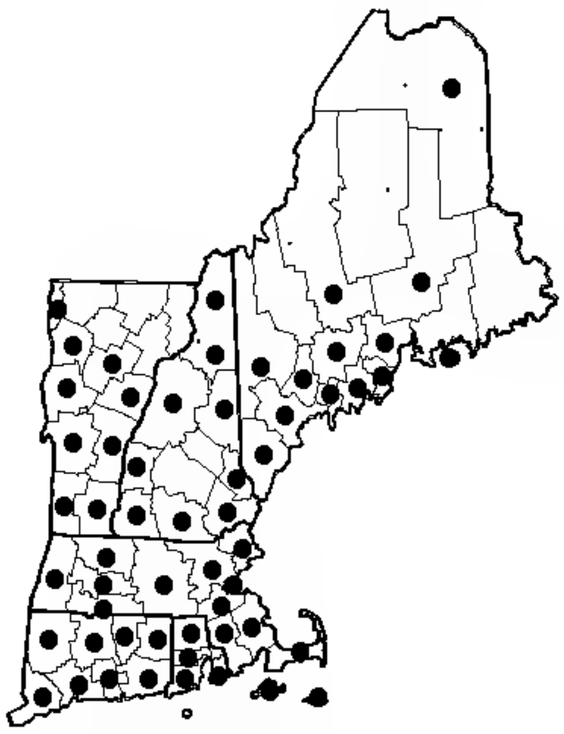
LYTHRUM ALATUM
var *ALATUM*



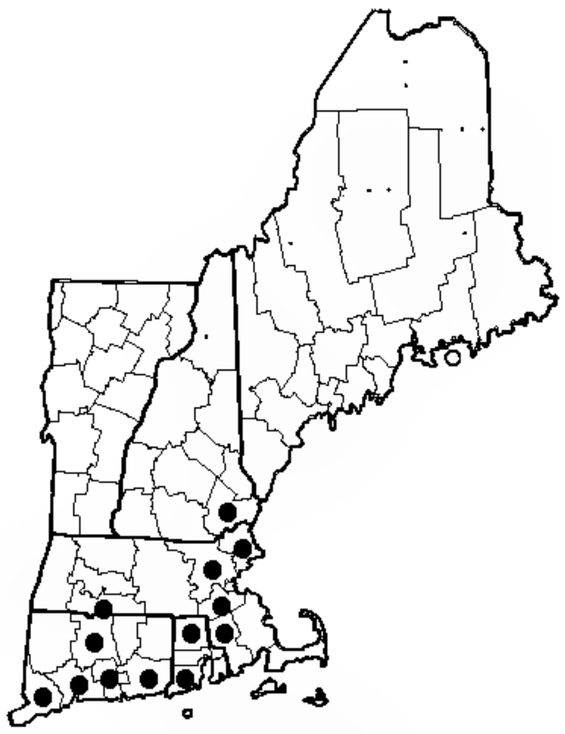
Lythrum hyssopifolia



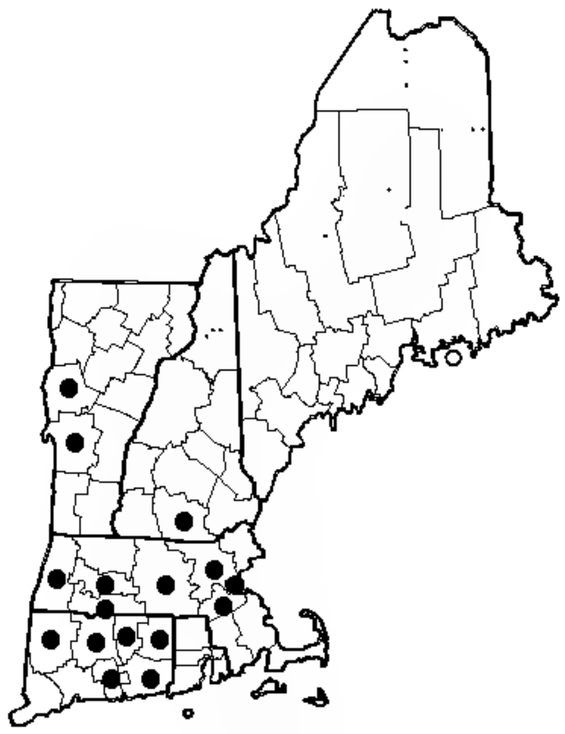
LYTHRUM JUNCEUM



LYTHRUM SALICARIA

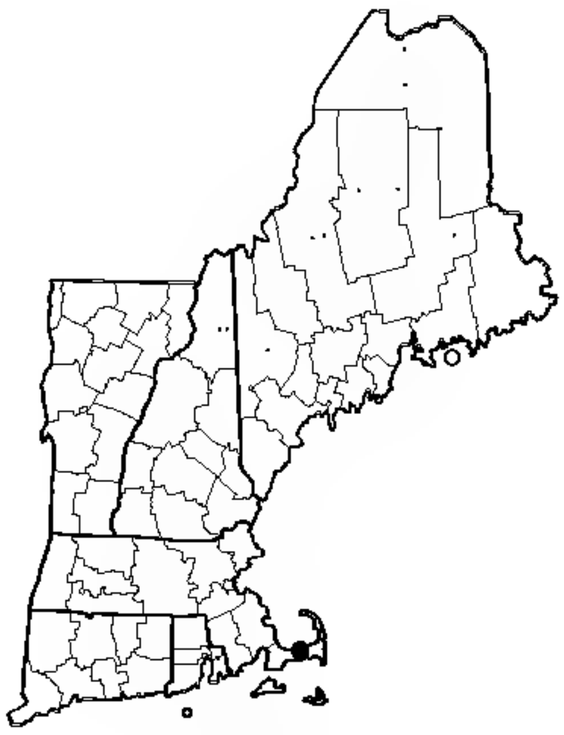


Rotala ramosior

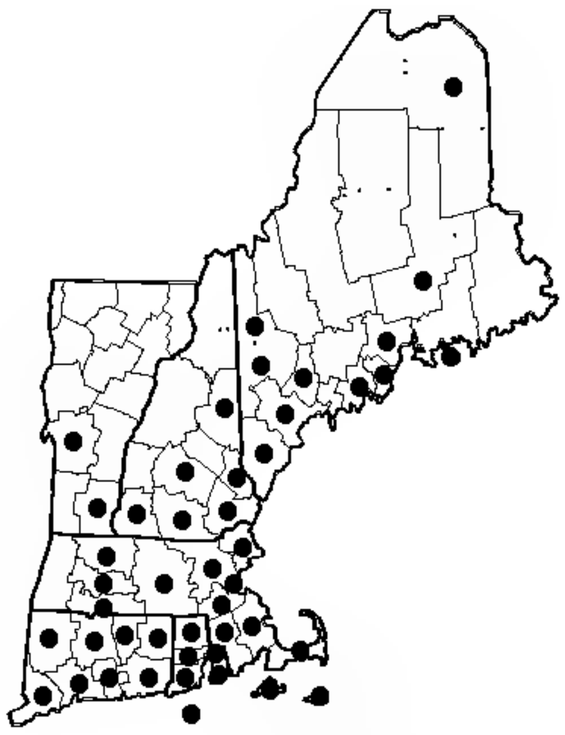


TRAPA NATANS

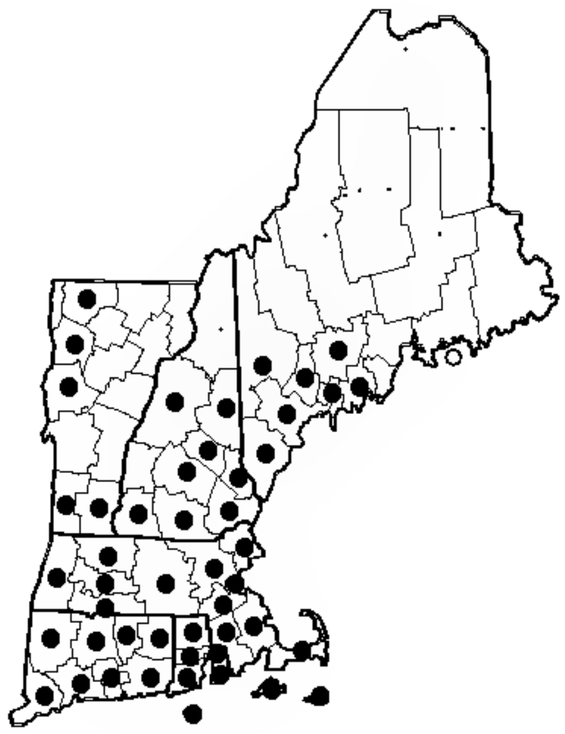
Figure 43 Distribution maps



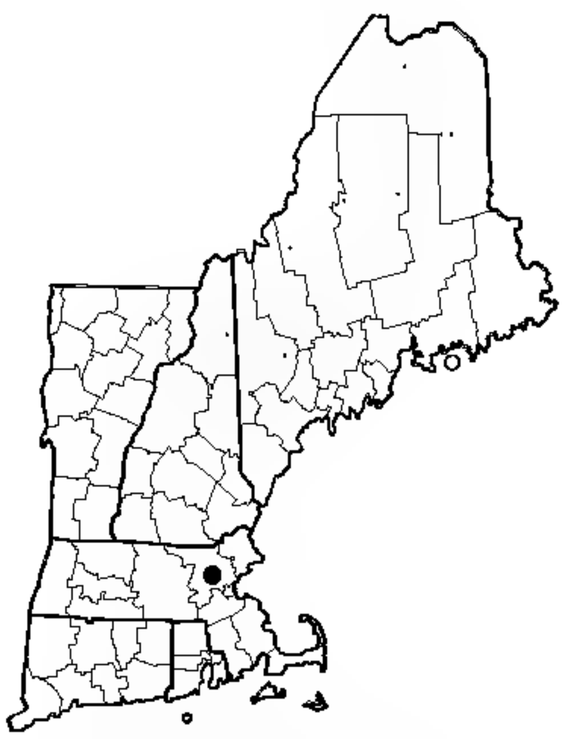
Rhexia mariana
var *mariana*



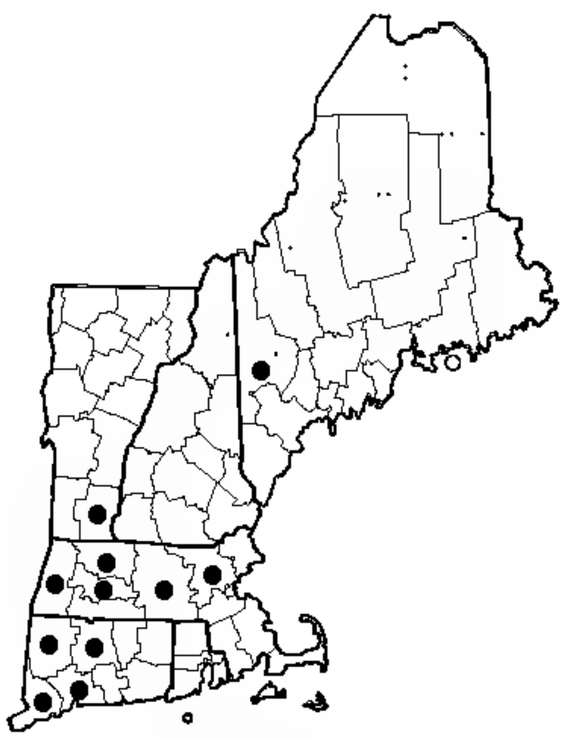
Rhexia virginica



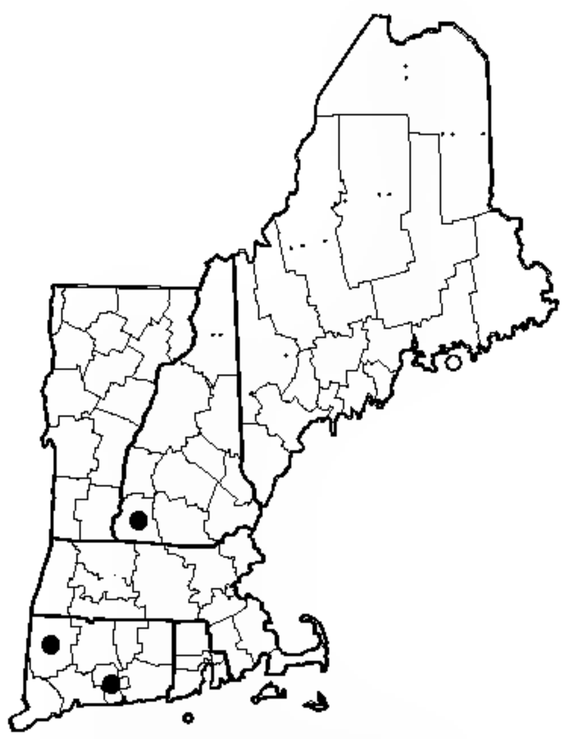
Nyssa sylvatica



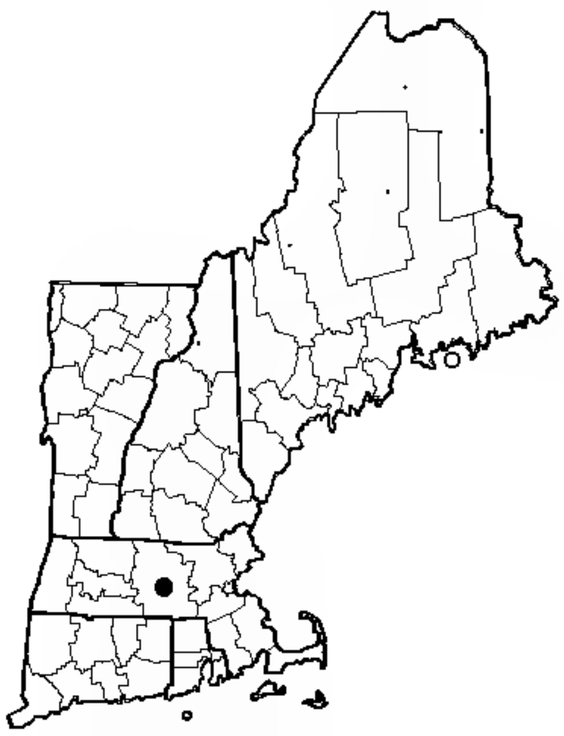
CHIONANTHUS VIRGINICUS



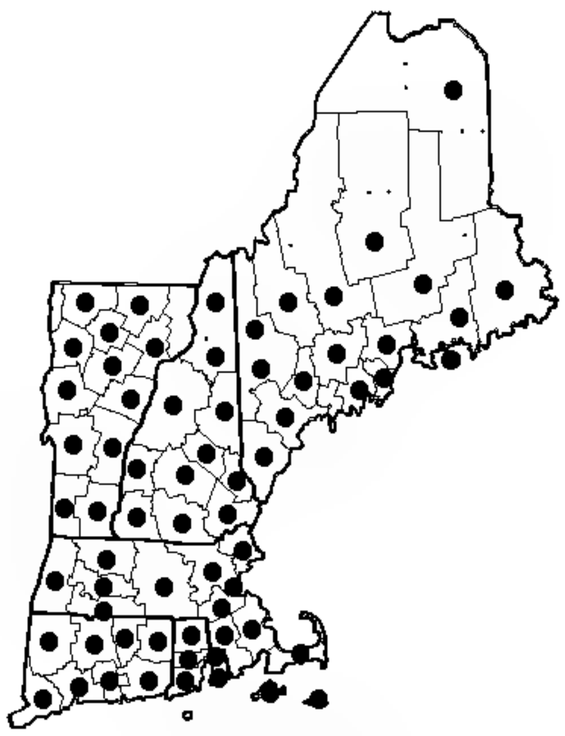
FORSYTHIA SUSPENSA



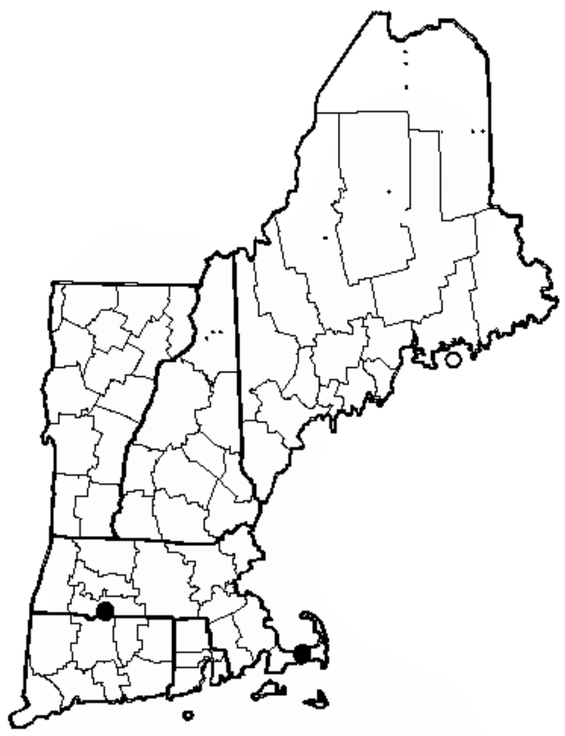
FORSYTHIA VIRIDISSIMA



FORSYTHIA X INTERMEDIA

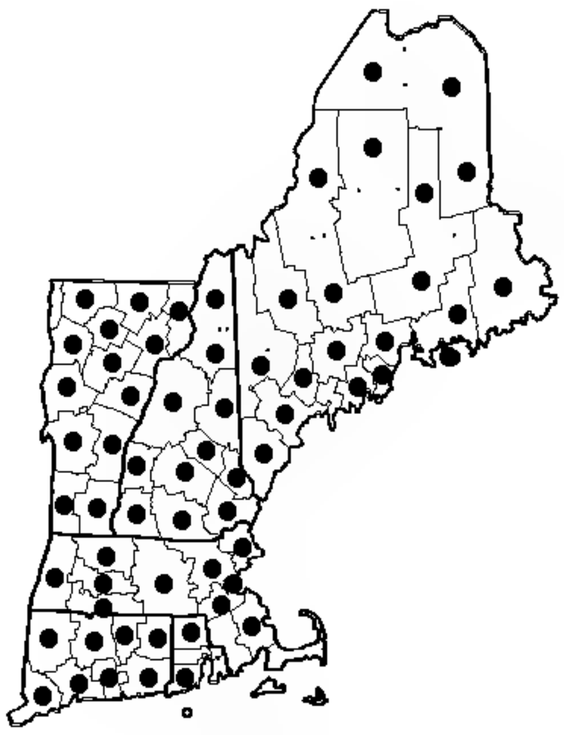


Fraxinus americana

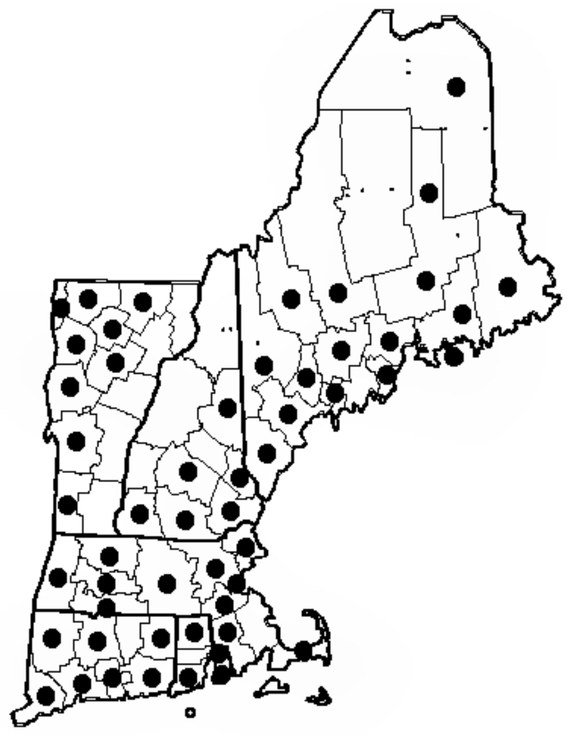


FRAXINUS EXCELSIOR

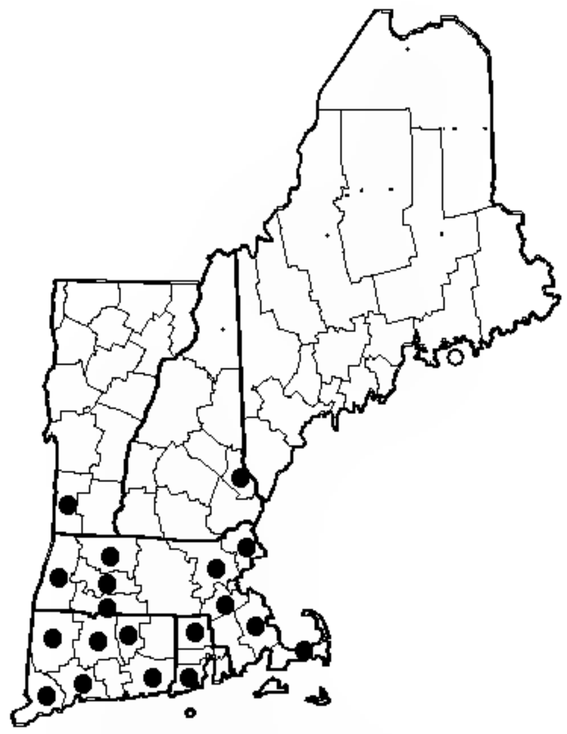
Figure 44 Distribution maps



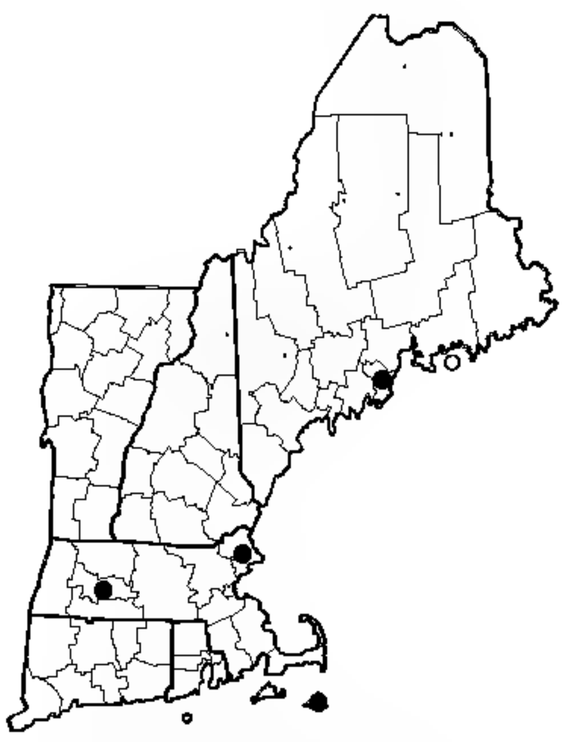
Fraxinus nigra



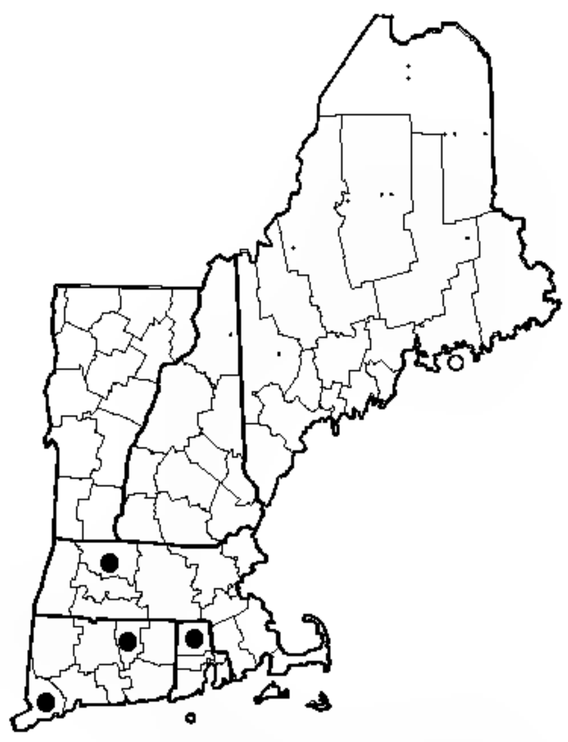
Fraxinus pennsylvanica



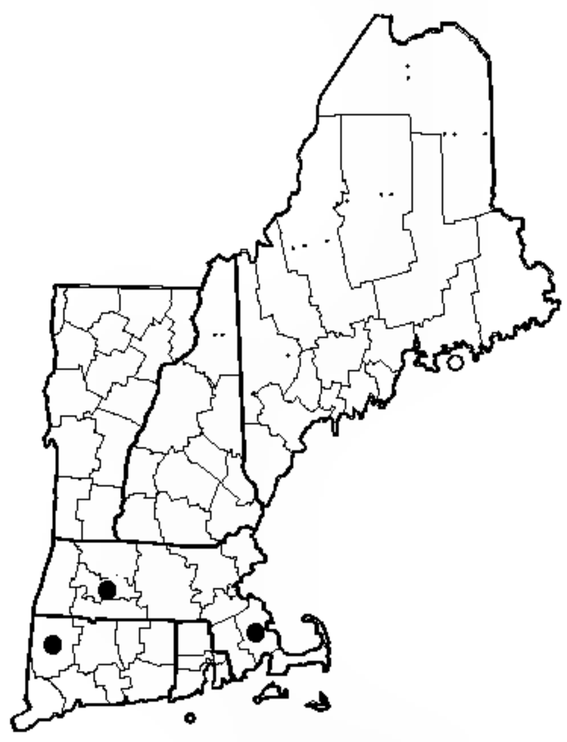
LIGUSTRUM OBTUSIFOLIUM
subsp. *OBTUSIFOLIUM*



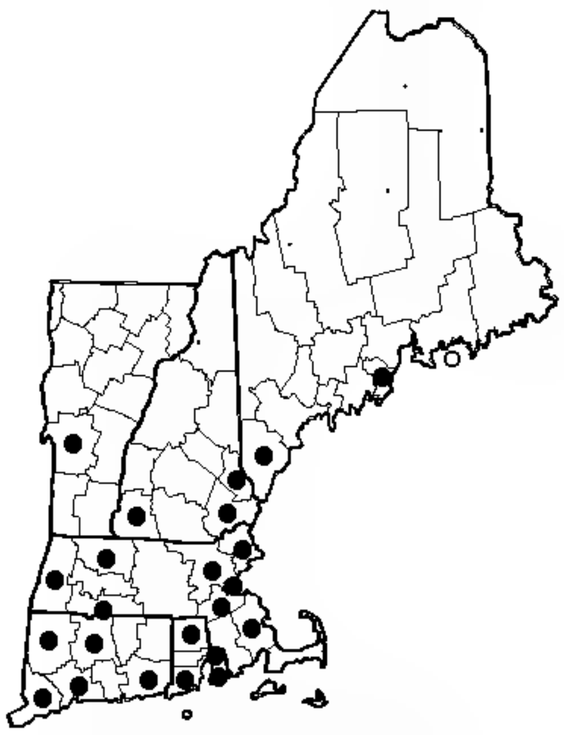
LIGUSTRUM OBTUSIFOLIUM
subsp. *SUAVE*



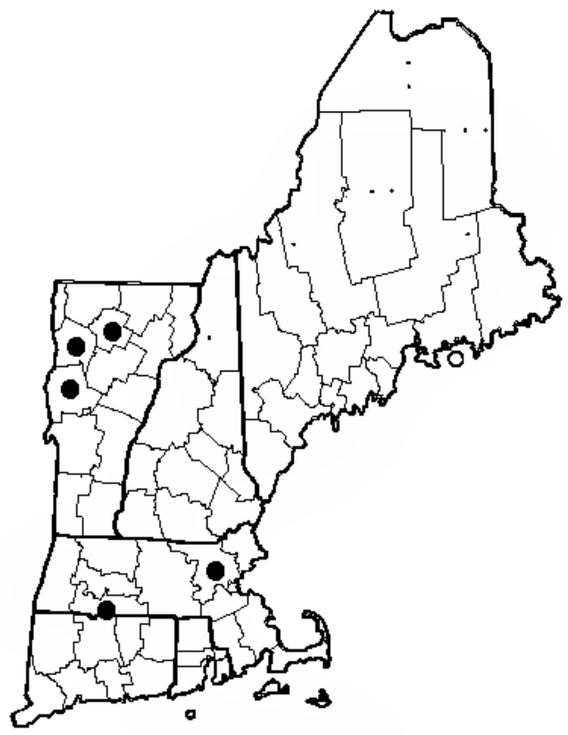
LIGUSTRUM OVALIFOLIUM



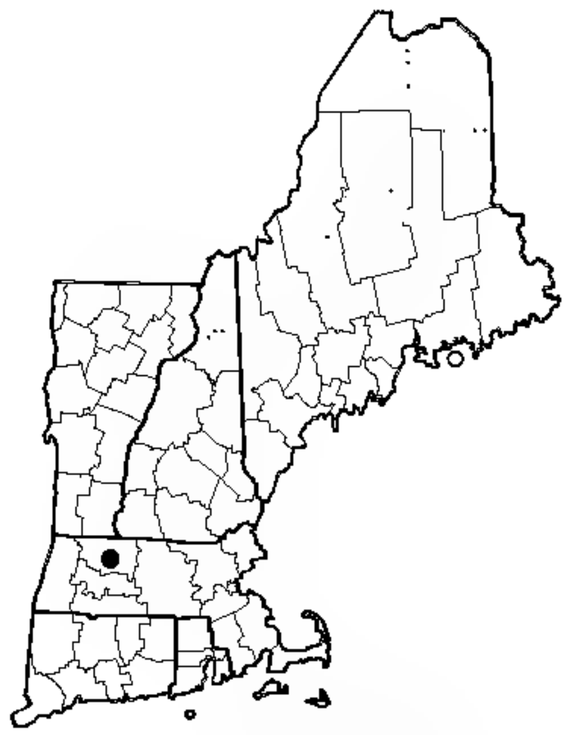
LIGUSTRUM SINENSE



LIGUSTRUM VULGARE

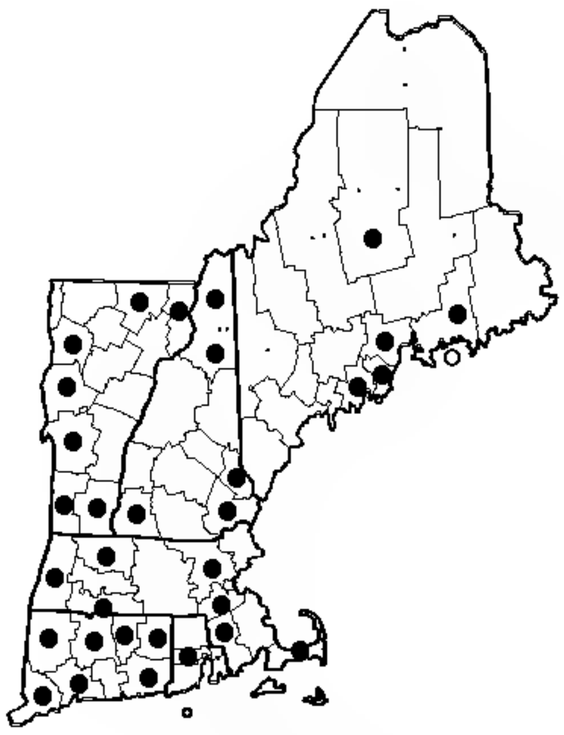


SYRINGA RETICULATA
subsp. *RETICULATA*

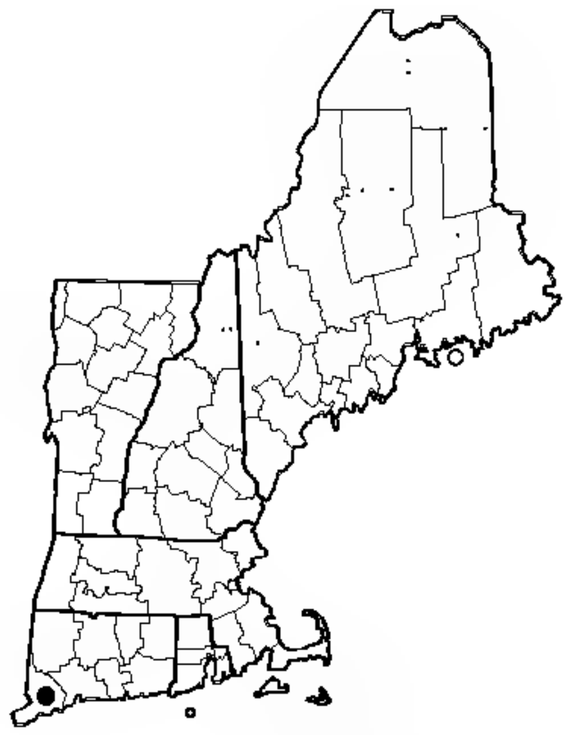


SYRINGA VILLOSA

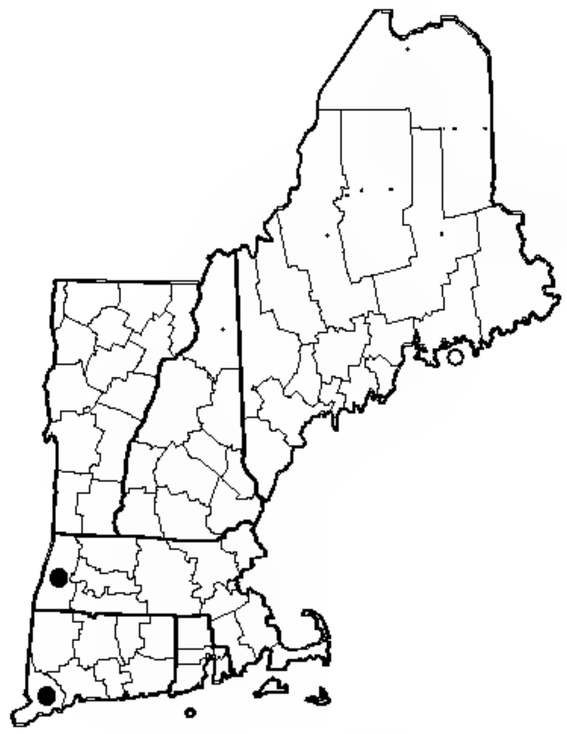
Figure 45 Distribution maps



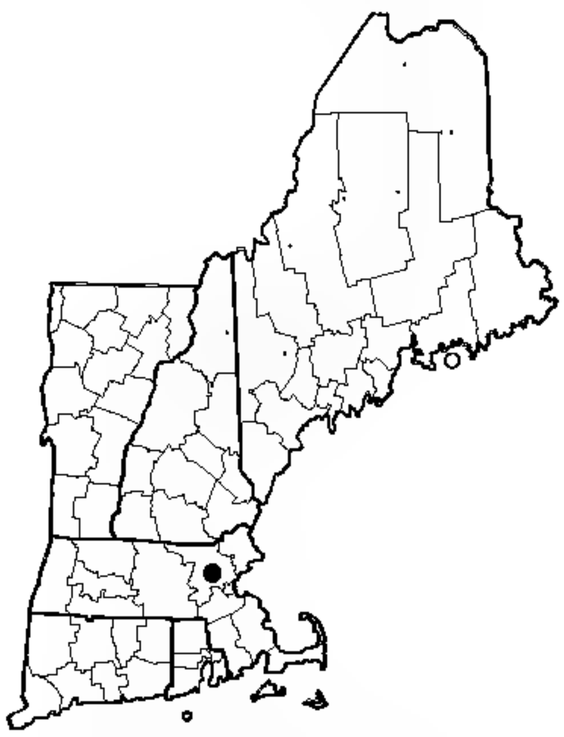
SYRINGA VULGARIS



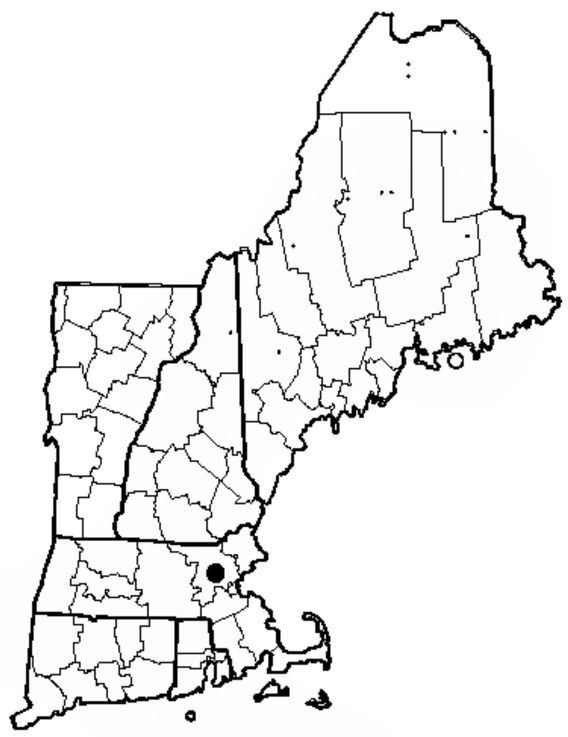
SYRINGA X CHINENSIS



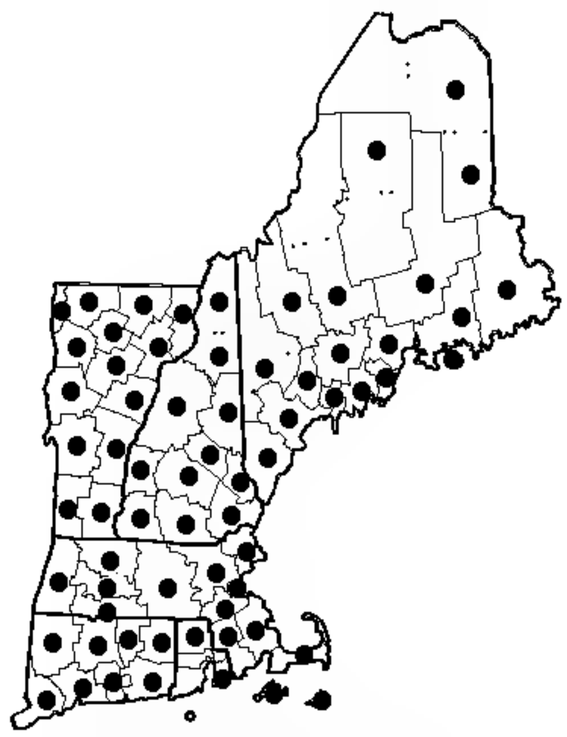
SYRINGA X PERSICA



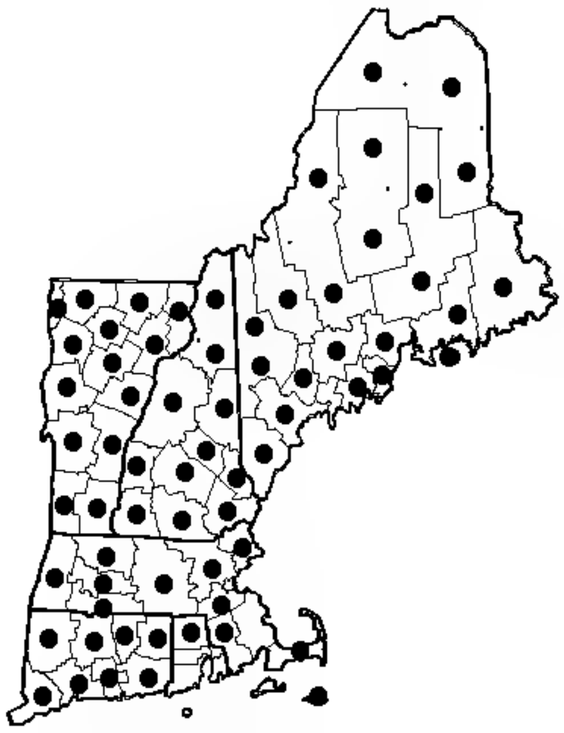
CAMISSONIA CAMPESTRIS
subsp. *CAMPESTRIS*



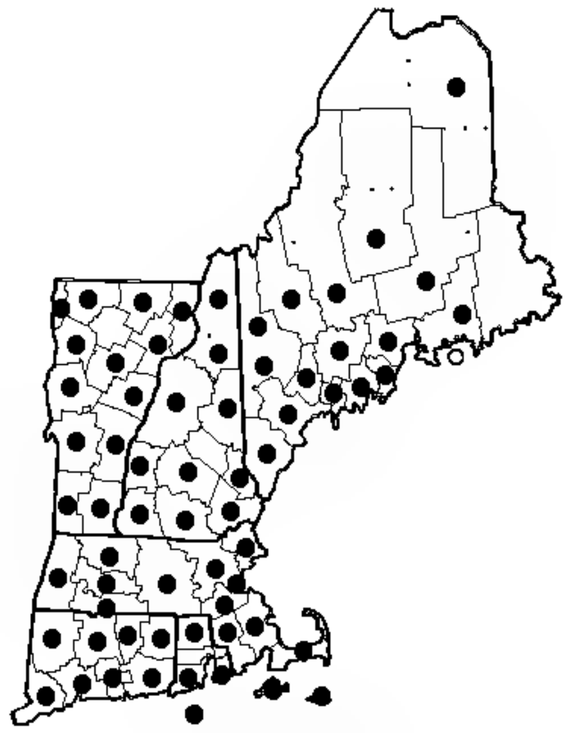
CAMISSONIOPSIS BISTORTA



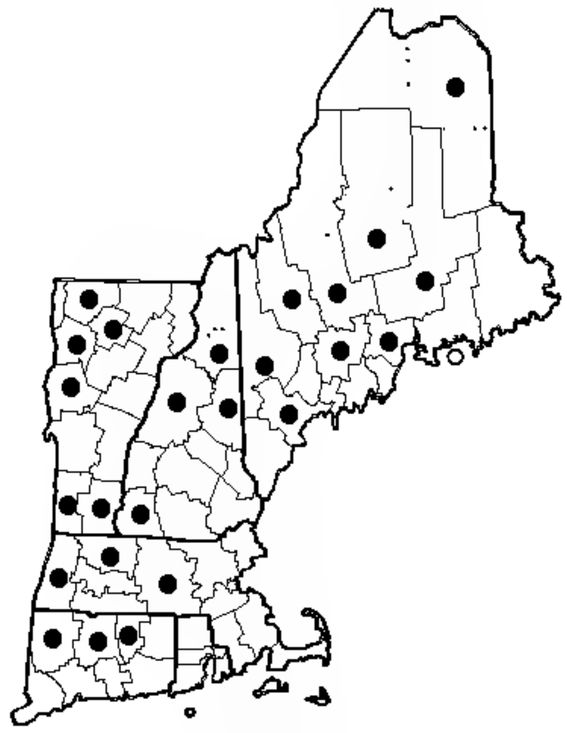
Chamaenerion angustifolium
subsp. *circumvagum*



Circaea alpina
subsp. *alpina*

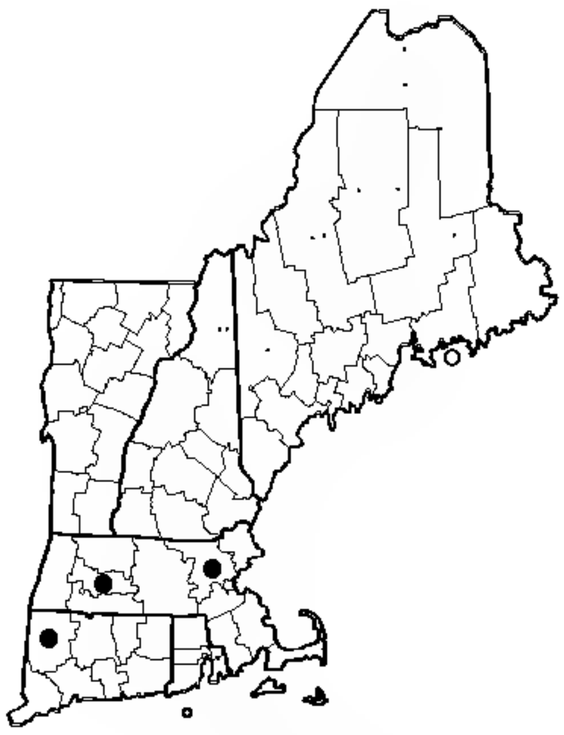


Circaea canadensis

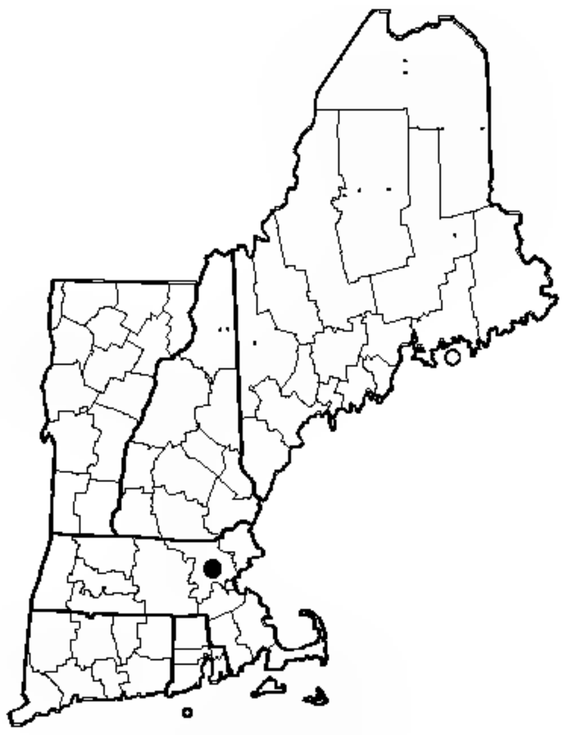


Circaea X sterilis

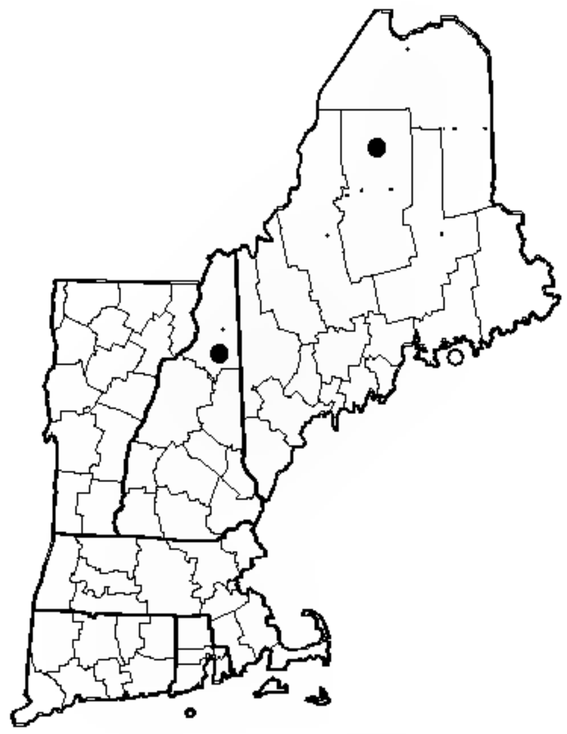
Figure 46 Distribution maps



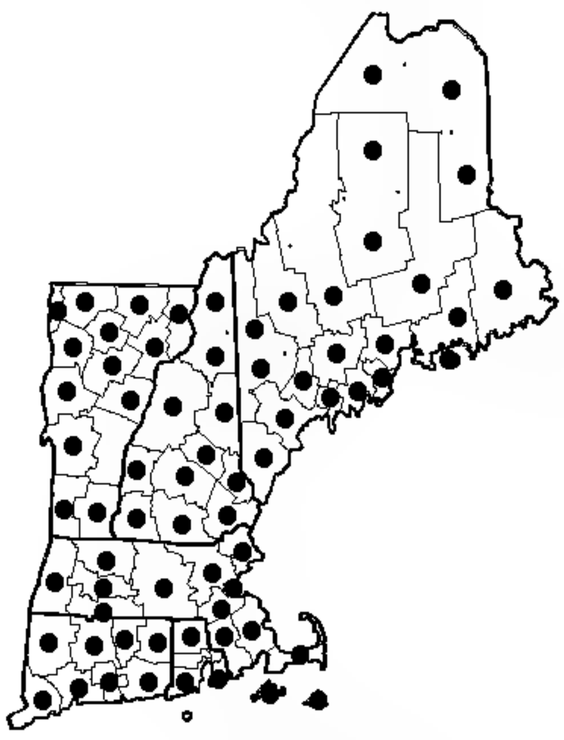
CLARKIA PULCHELLA



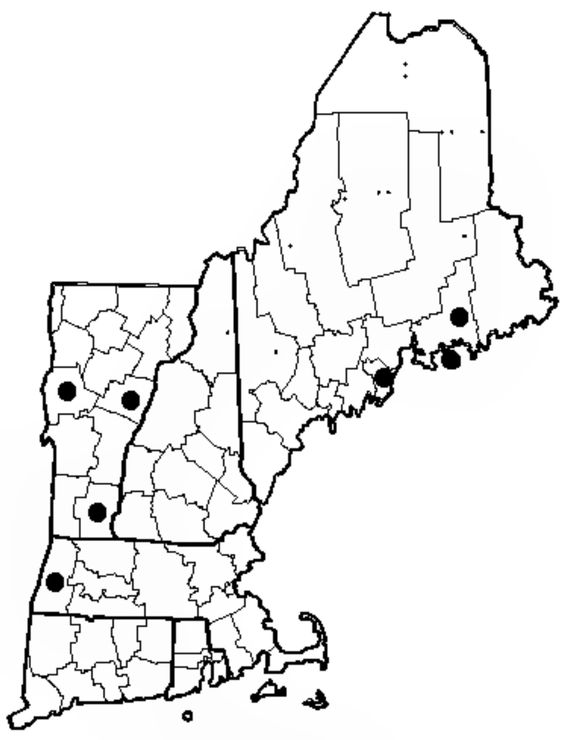
CLARKIA RHOMBOIDEA



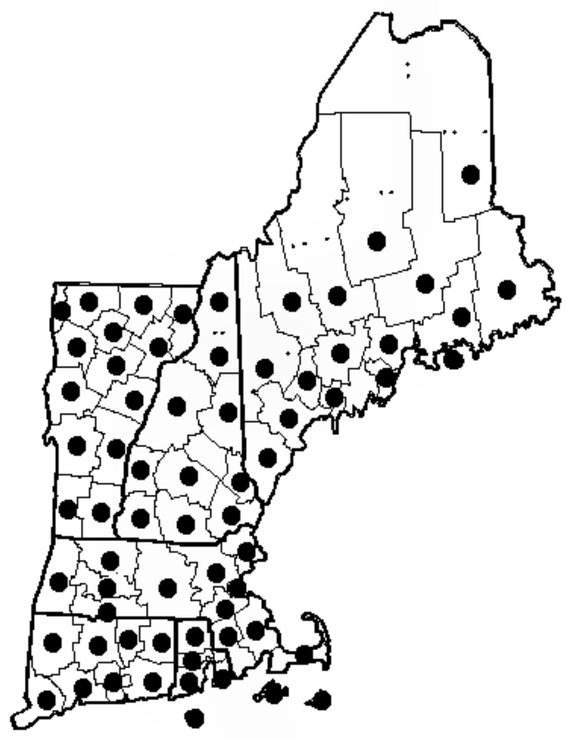
Epilobium anagallidifolium



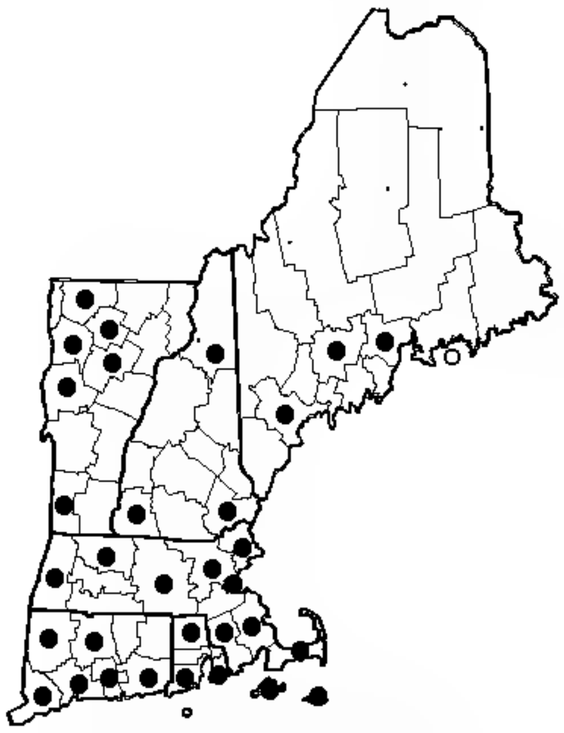
Epilobium ciliatum
subsp. *ciliatum*



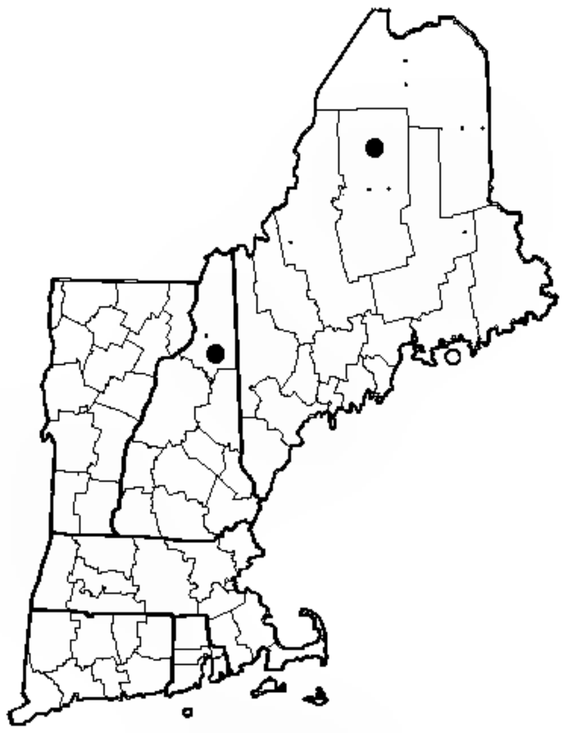
Epilobium ciliatum
subsp. *glandulosum*



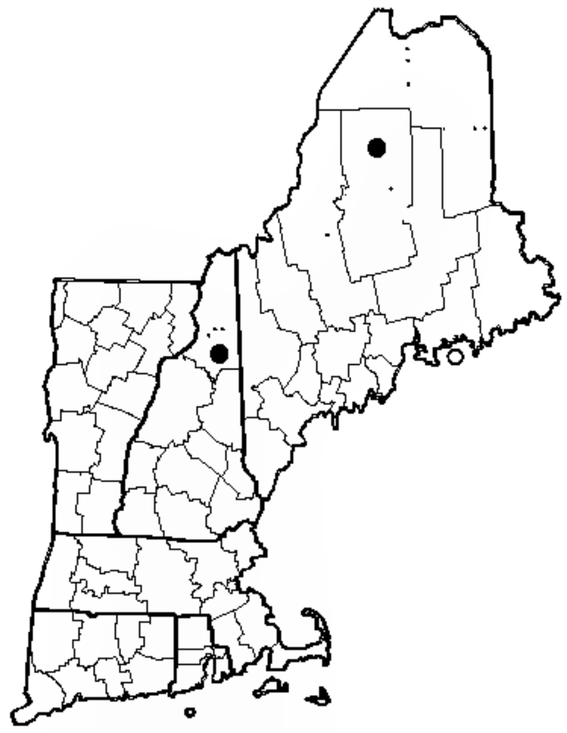
Epilobium coloratum



EPILOBIUM HIRSUTUM

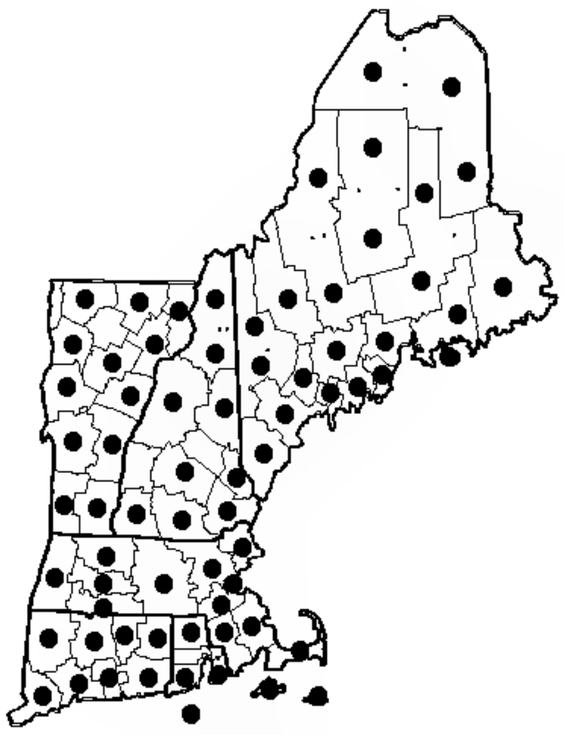


Epilobium hornemannii
subsp. *hornemannii*

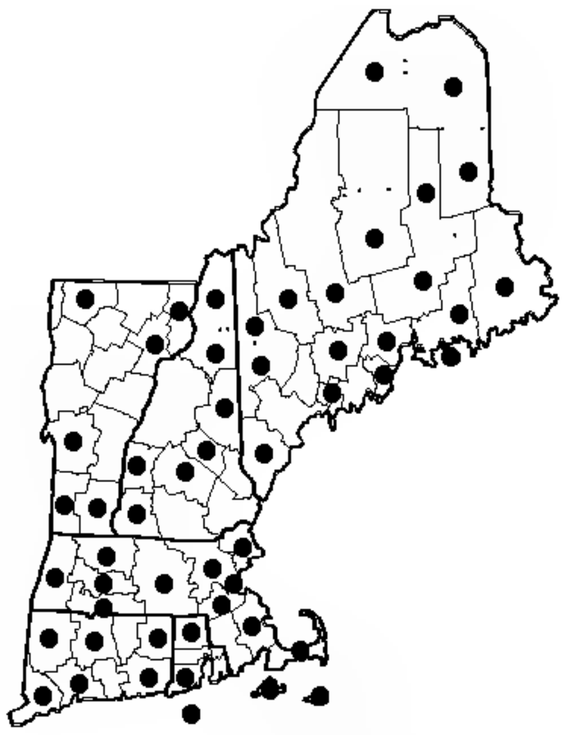


Epilobium lactiflorum

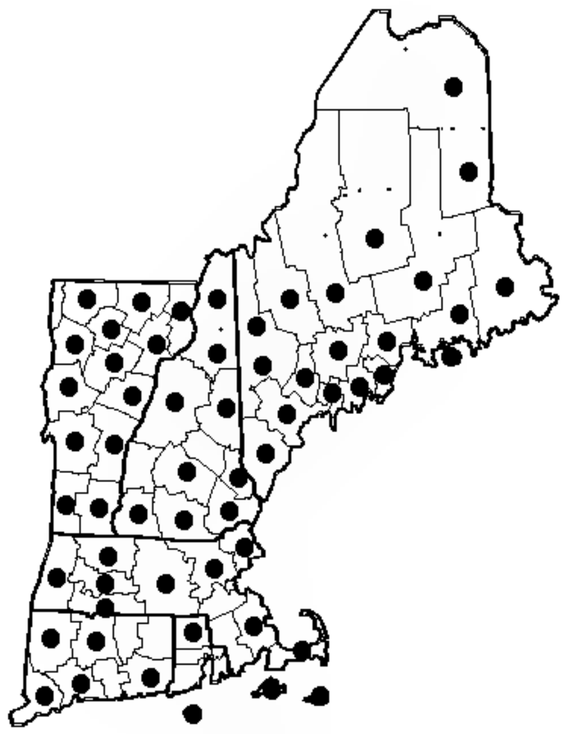
Figure 47 Distribution maps



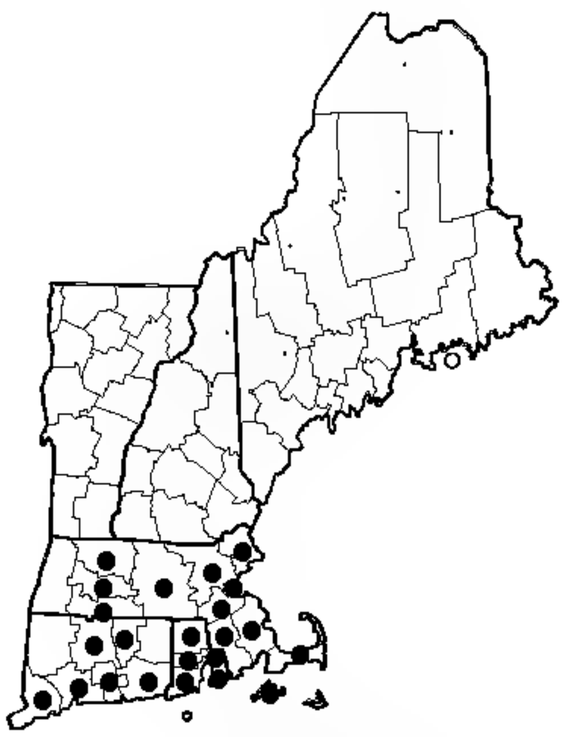
Epilobium leptophyllum



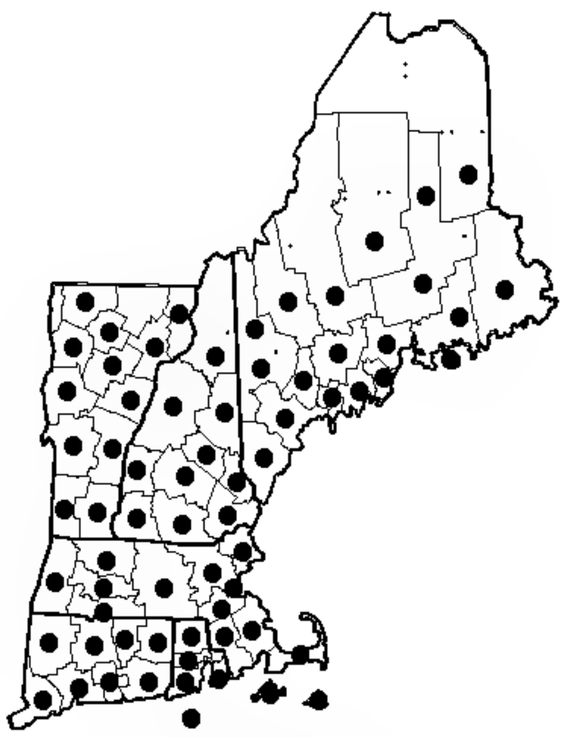
Epilobium palustre



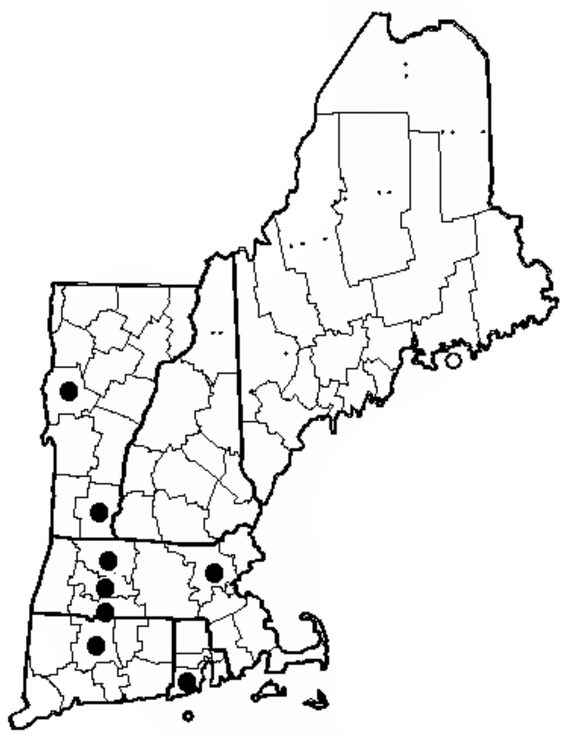
Epilobium strictum



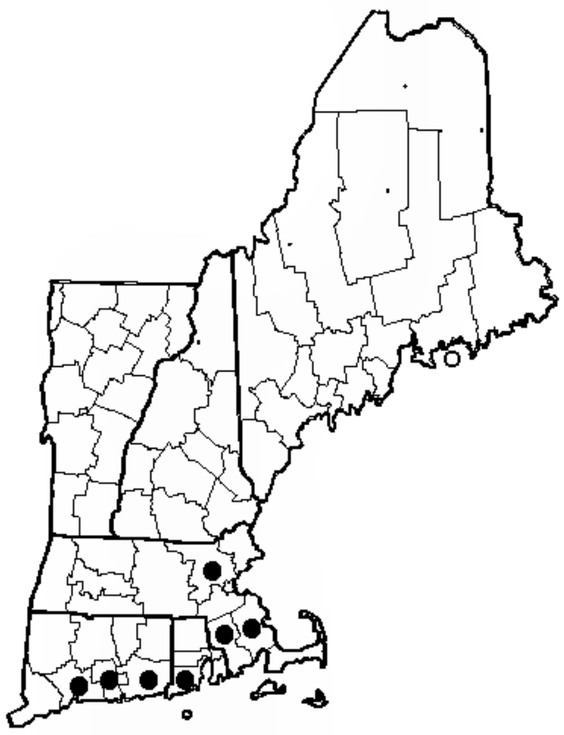
Ludwigia alternifolia



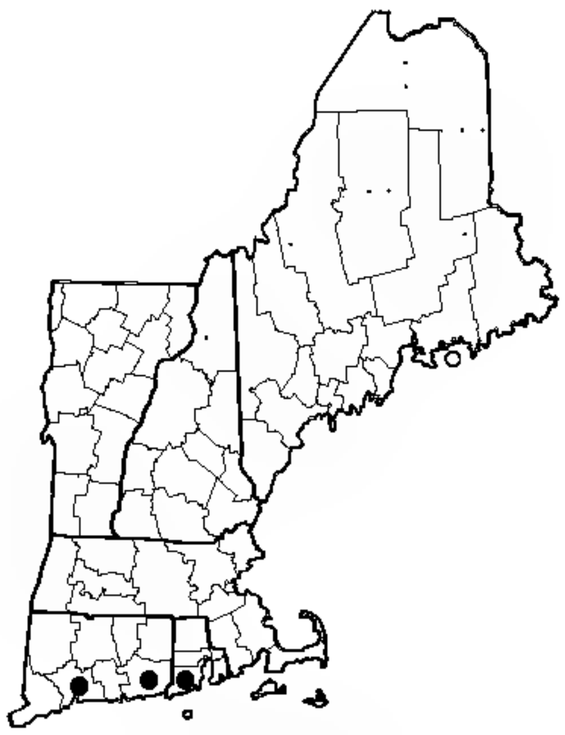
Ludwigia palustris



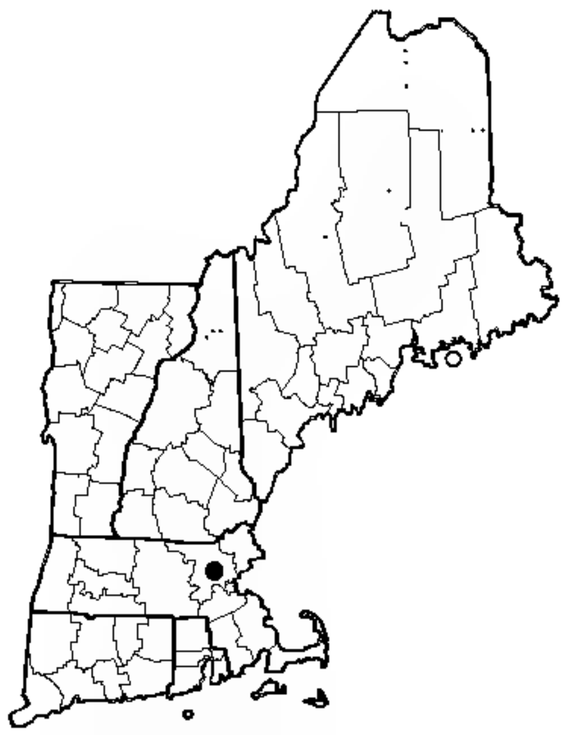
Ludwigia polycarpa



Ludwigia sphaerocarpa

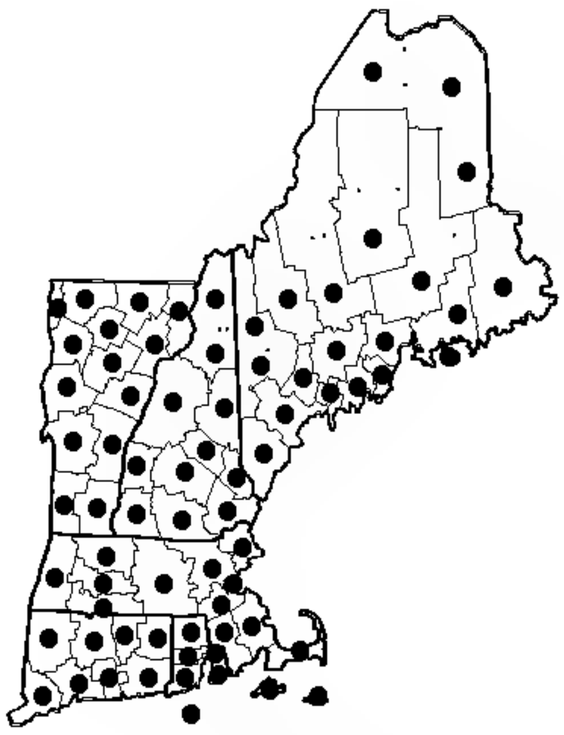


Ludwigia X lacustris

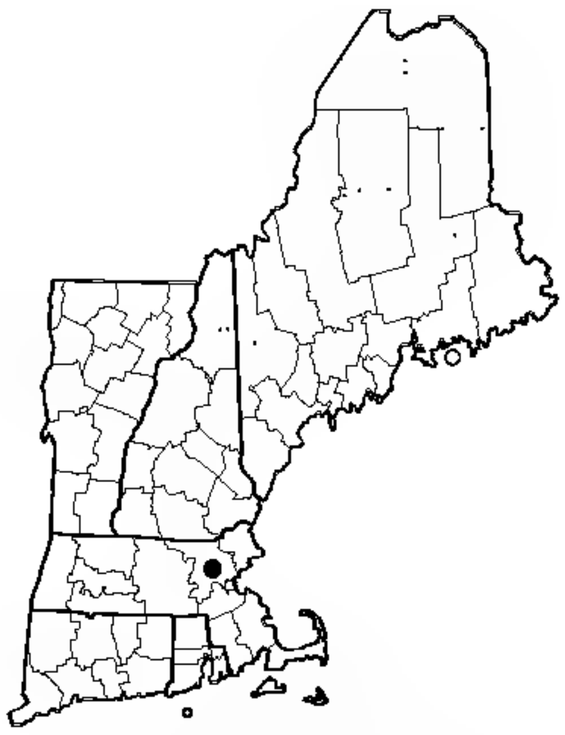


OENOTHERA AFFINIS

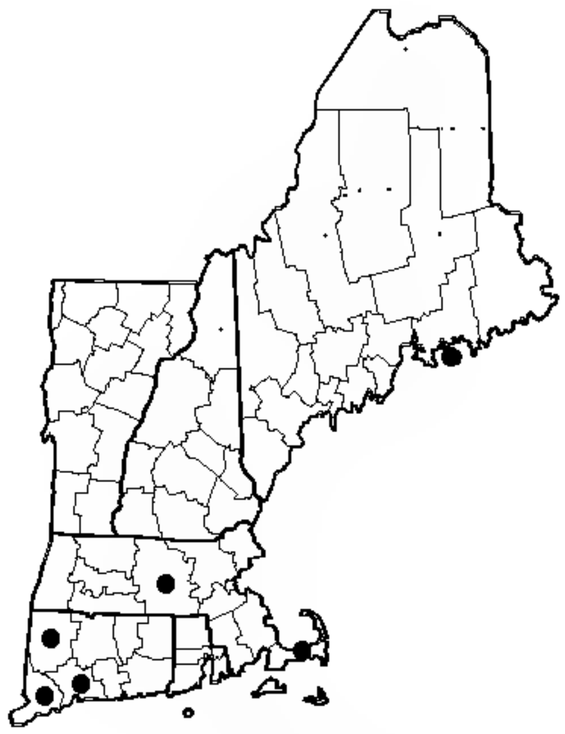
Figure 48 Distribution maps



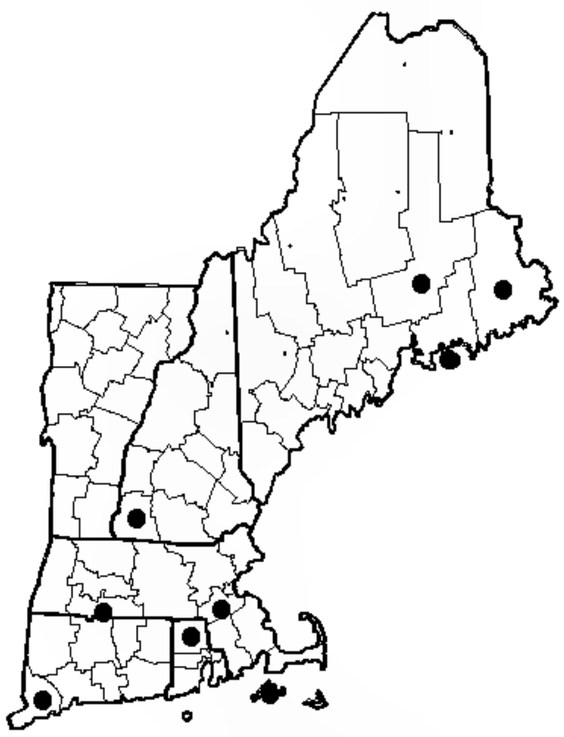
Oenothera biennis



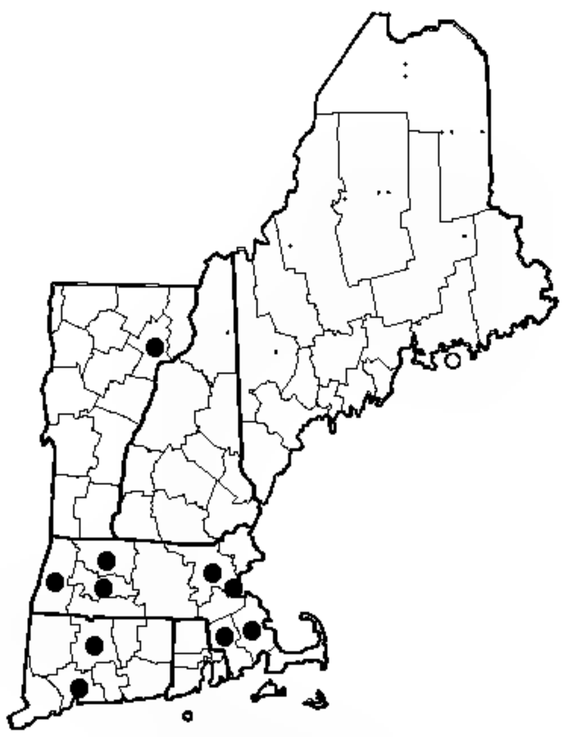
OENOTHERA CURTIFLORA



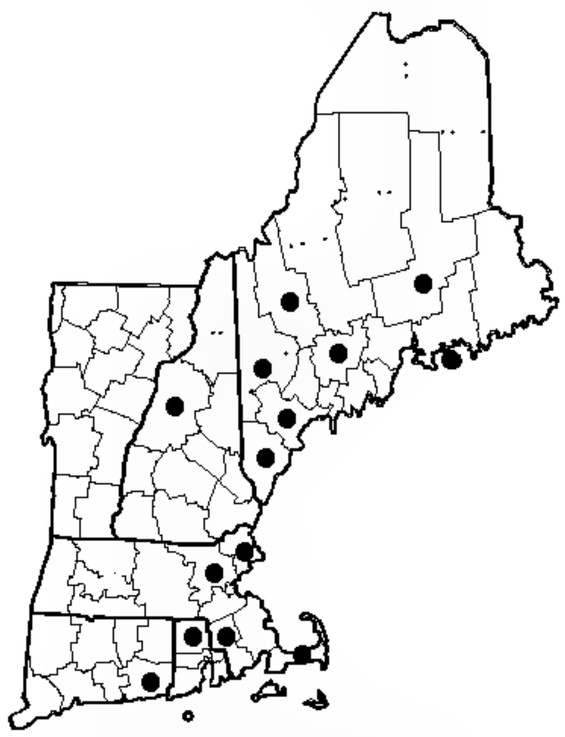
Oenothera fruticosa
subsp. *fruticosa*



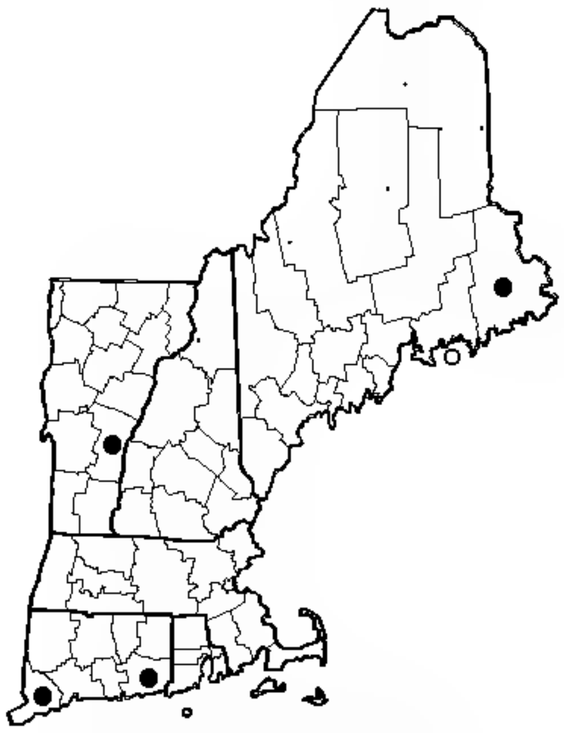
Oenothera fruticosa
subsp. *tetragona*



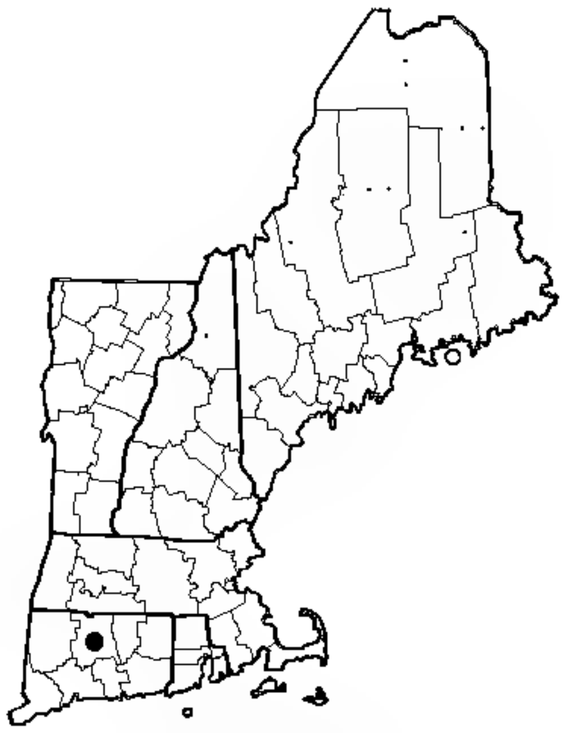
OENOTHERA GAURA



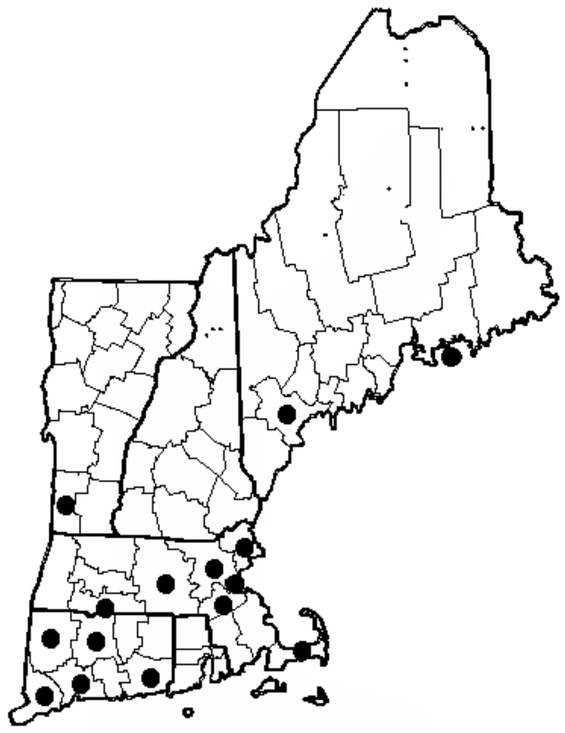
OENOTHERA GLAZIOVIANA



OENOTHERA GRANDIFLORA

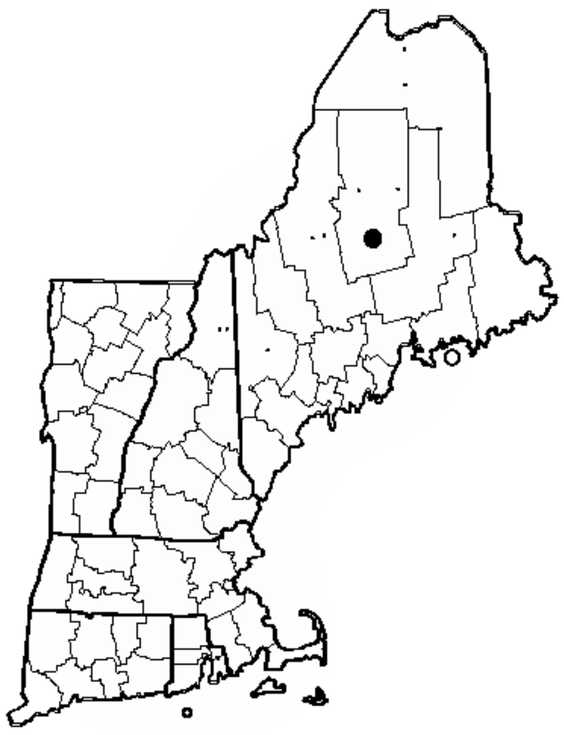


OENOTHERA GRANDIS

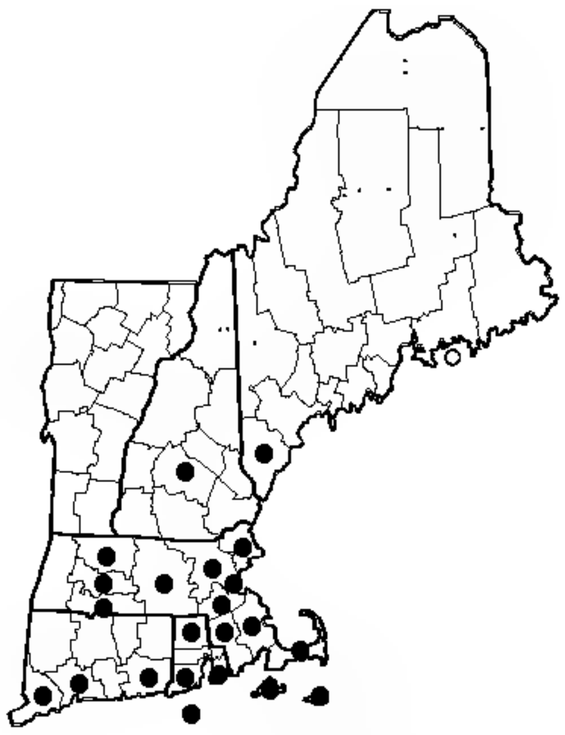


OENOTHERA LACINIATA

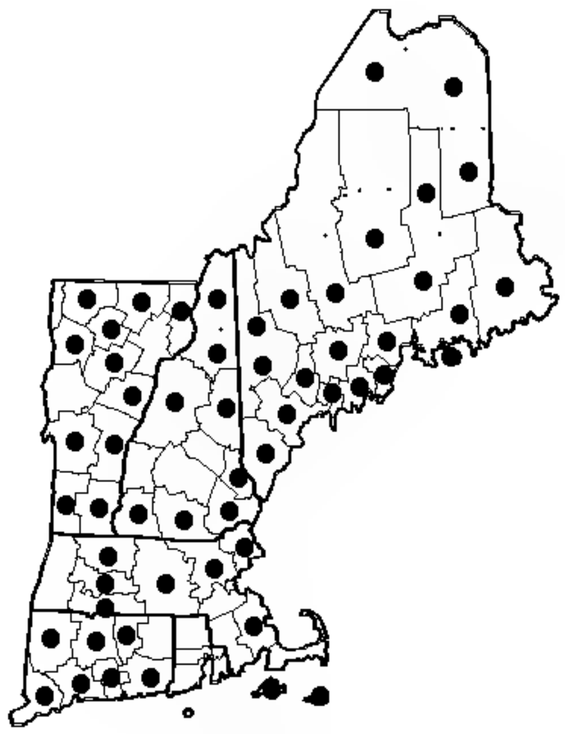
Figure 49 Distribution maps



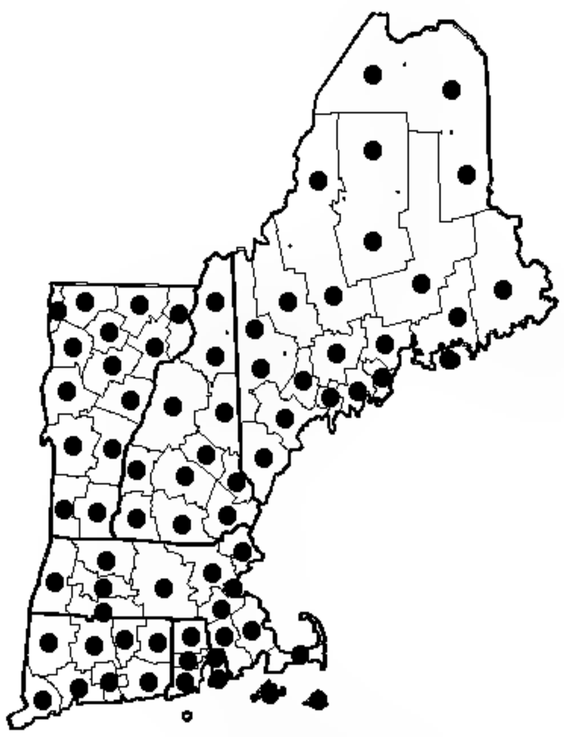
Oenothera nutans



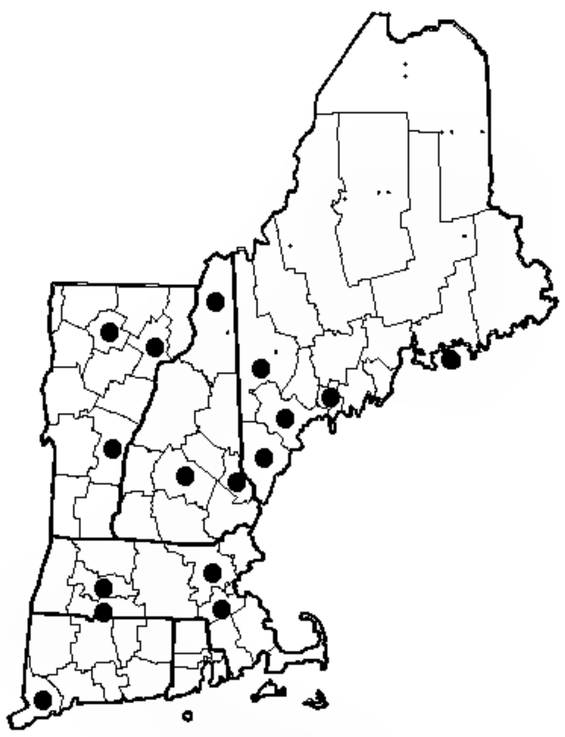
Oenothera oakesiana



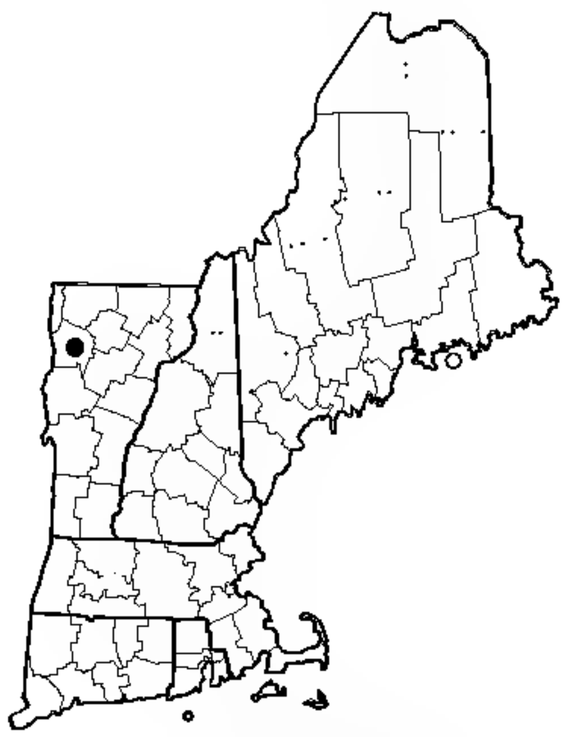
Oenothera parviflora



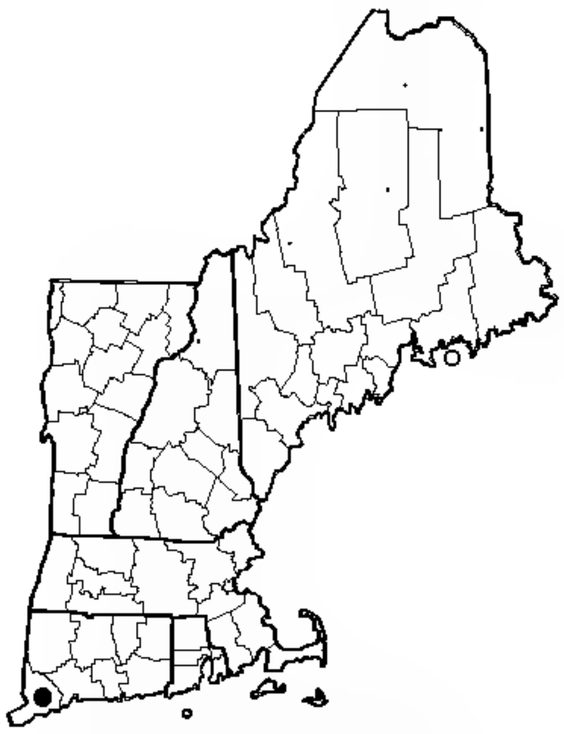
Oenothera perennis



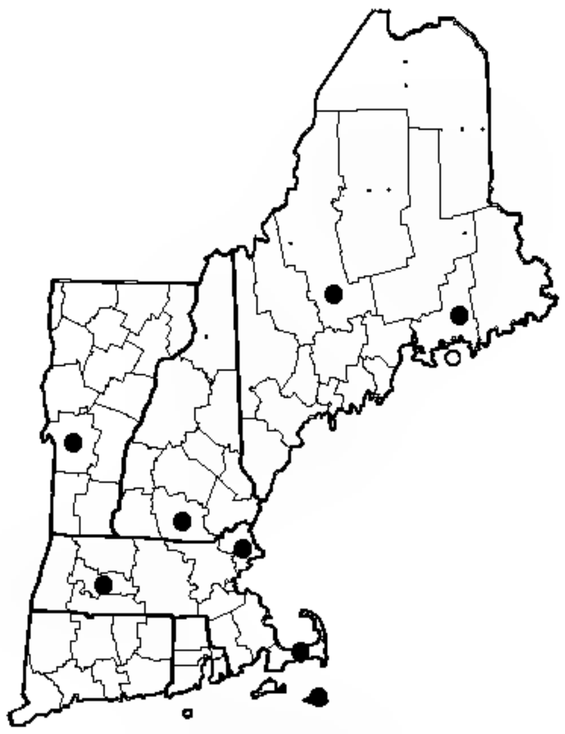
OENOTHERA PILOSELLA



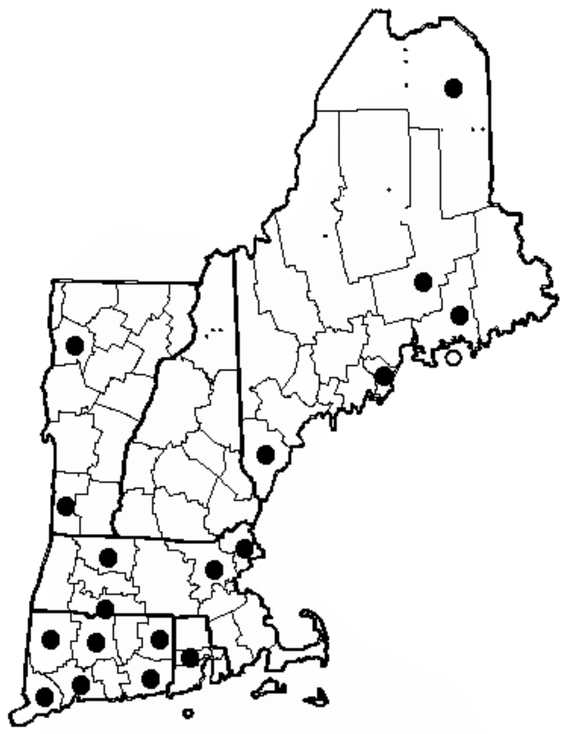
OENOTHERA SERRULATA



OENOTHERA SPECIOSA

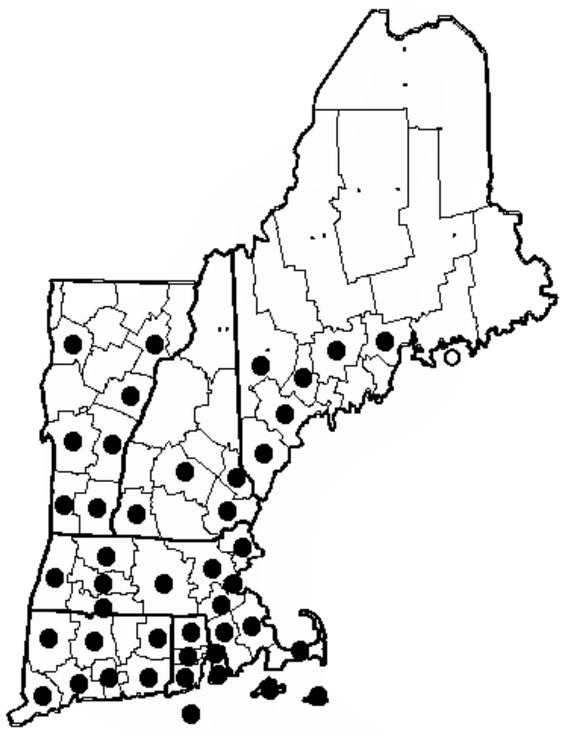


OENOTHERA VILLOSA
subsp. *VILLOSA*

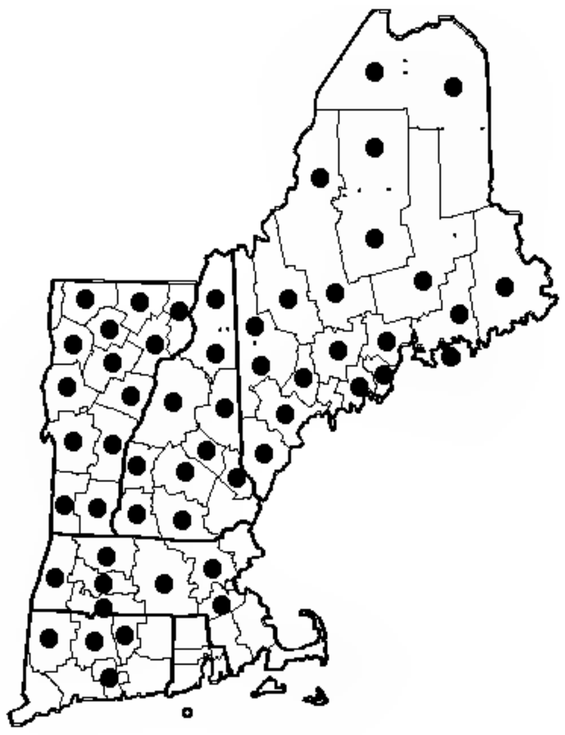


OXALIS CORNICULATA

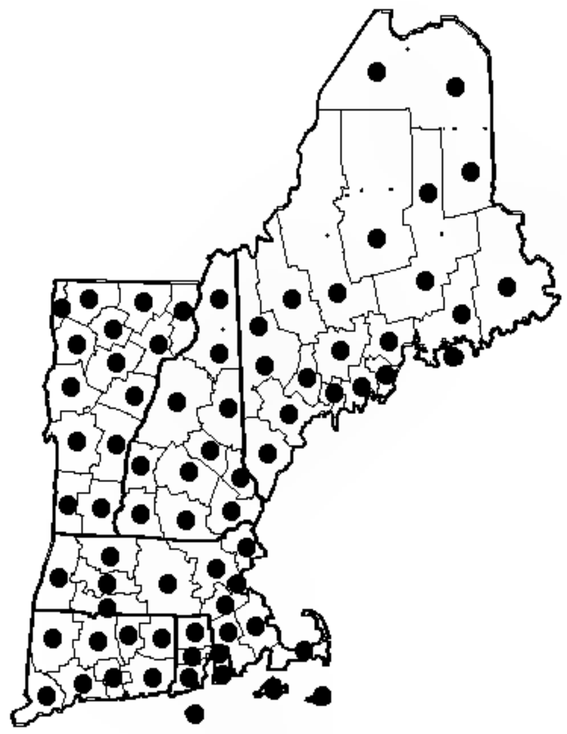
Figure 50 Distribution maps



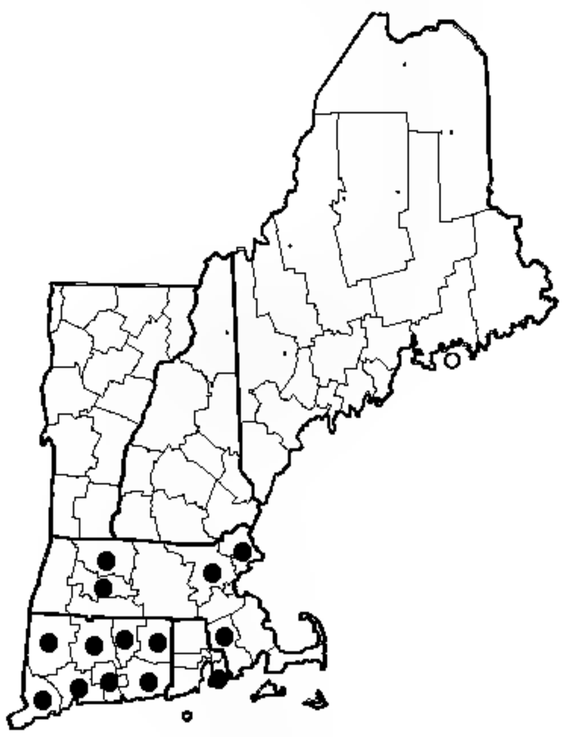
Oxalis dillenii



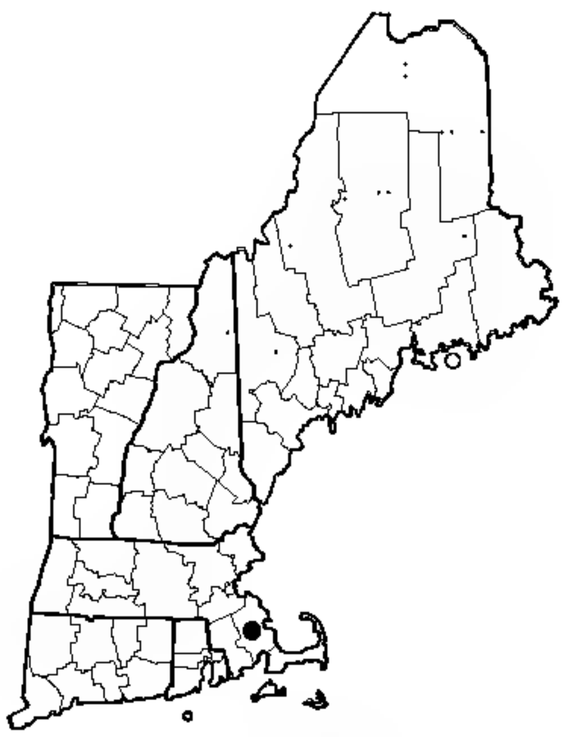
Oxalis montana



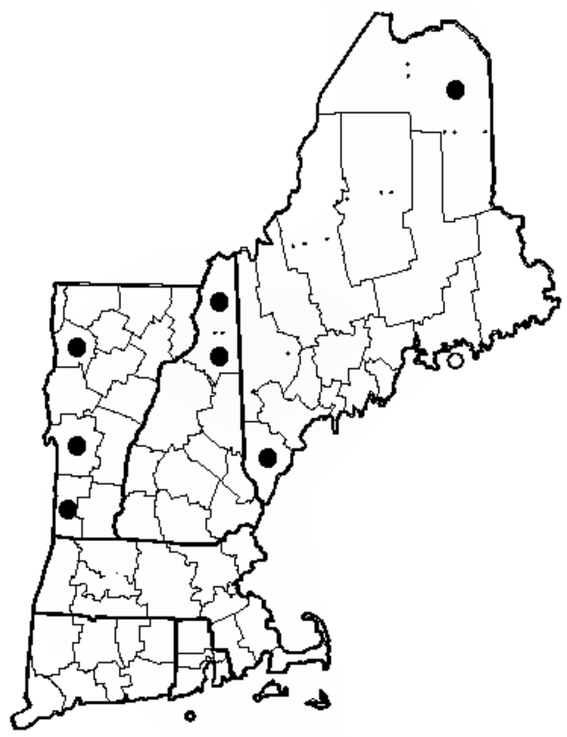
Oxalis stricta



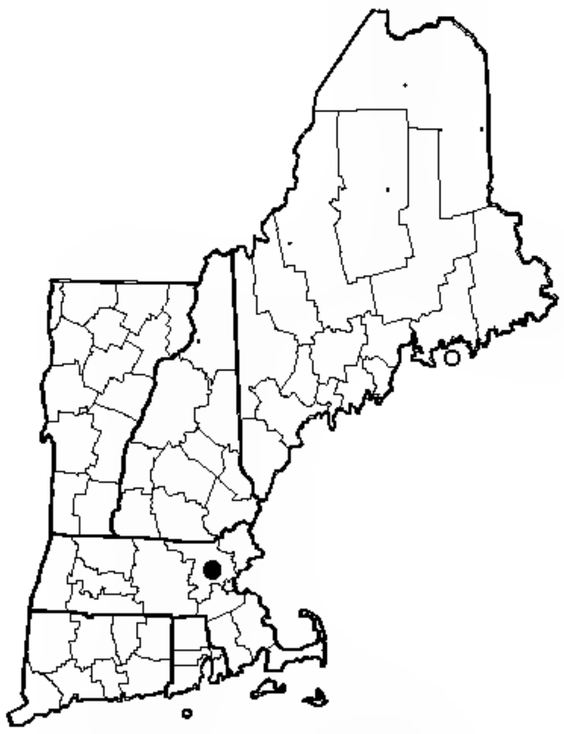
Oxalis violacea



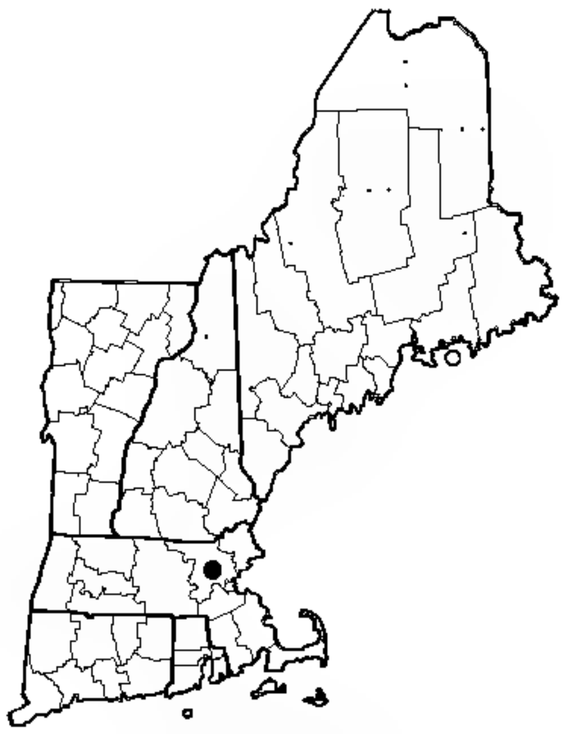
Oxalis dillenii
X *O stricta*



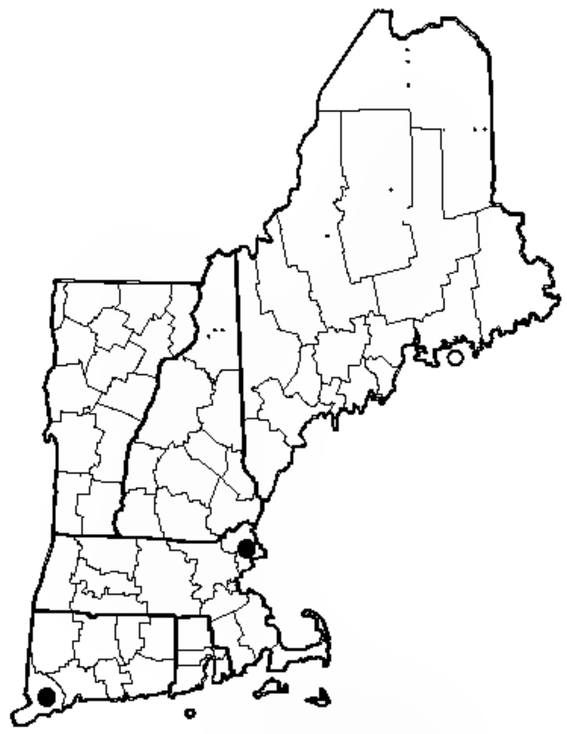
COLIOMIA LINEARIS



GILIA ACHILLEIFOLIA
subsp. *MULTICAULIS*

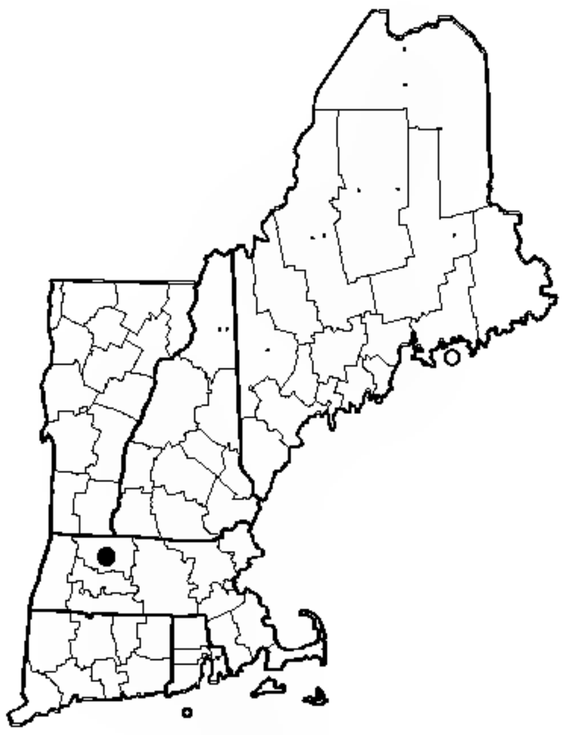


GILIA INTERIOR

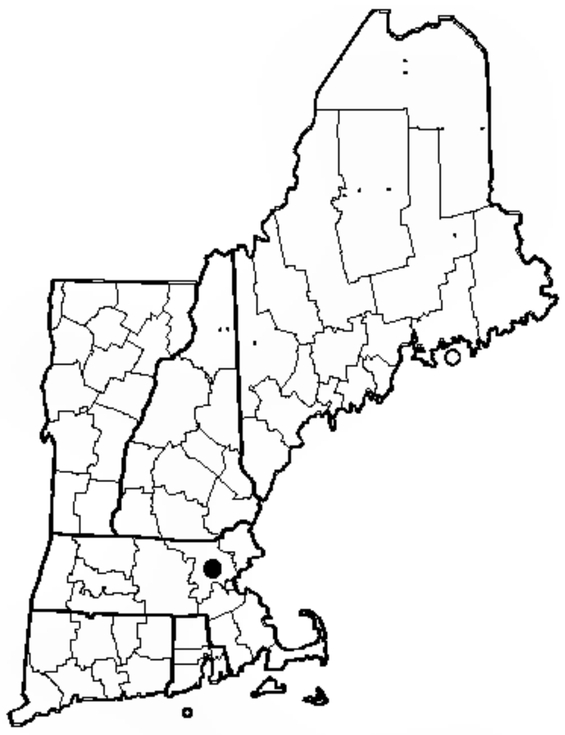


GILIA TRICOLOR
subsp. *DIFFUSA*

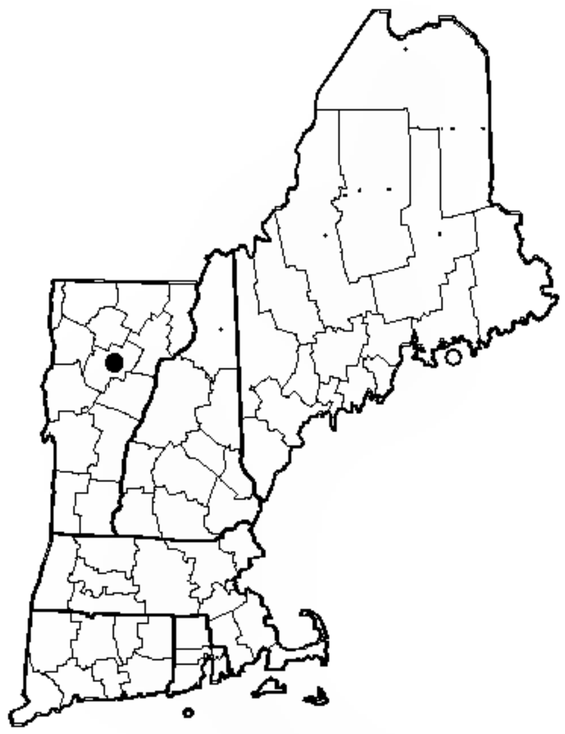
Figure 51 Distribution maps



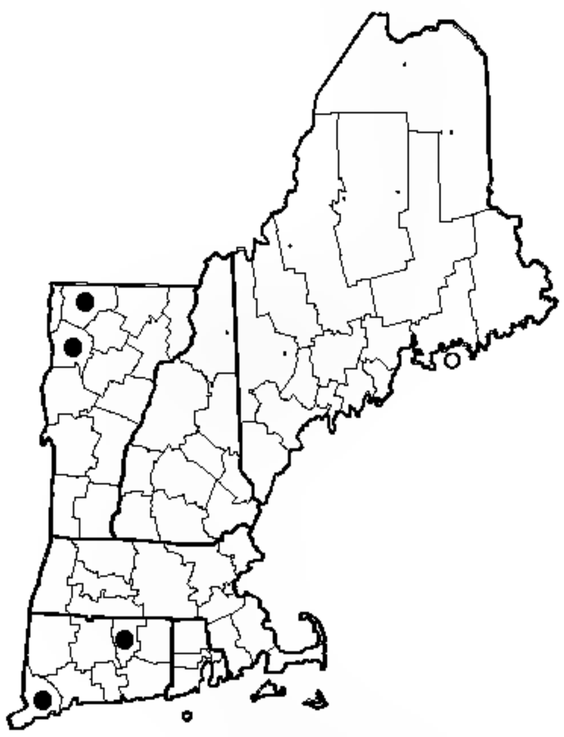
IPOMOPSIS RUBRA



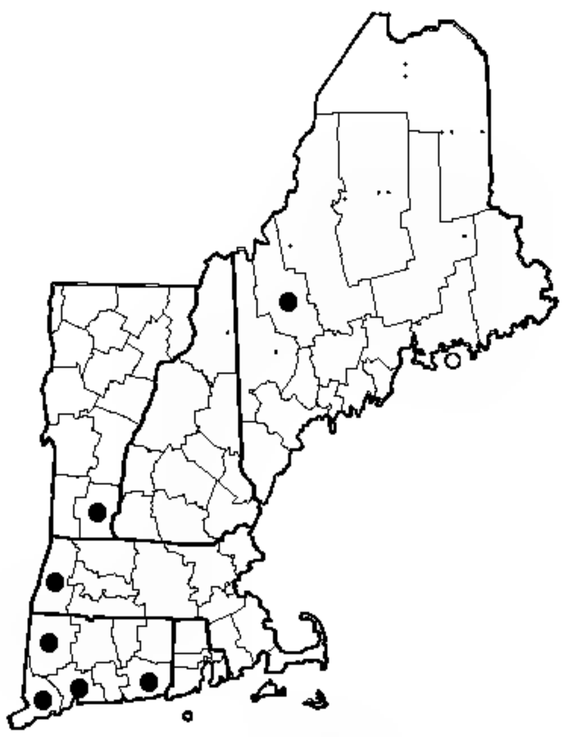
NAVARRETIA LEUCOCEPHALA
subsp. *MINIMA*



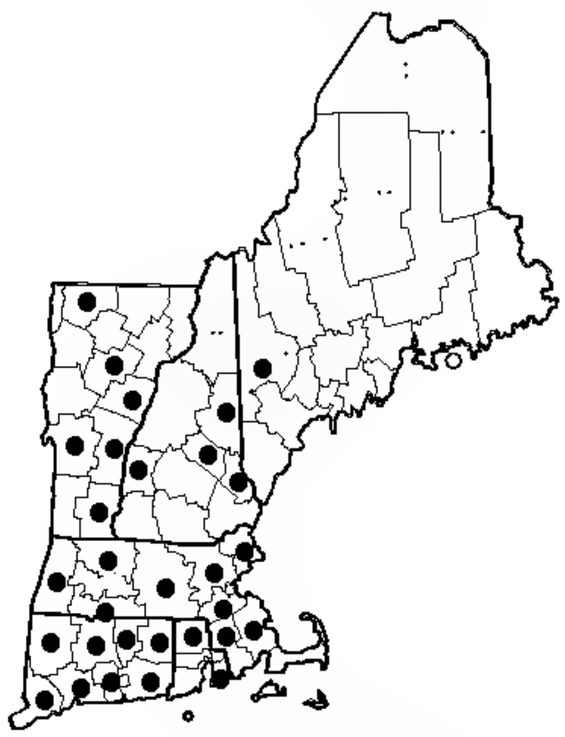
PHLOX BIFIDA
subsp. *BIFIDA*



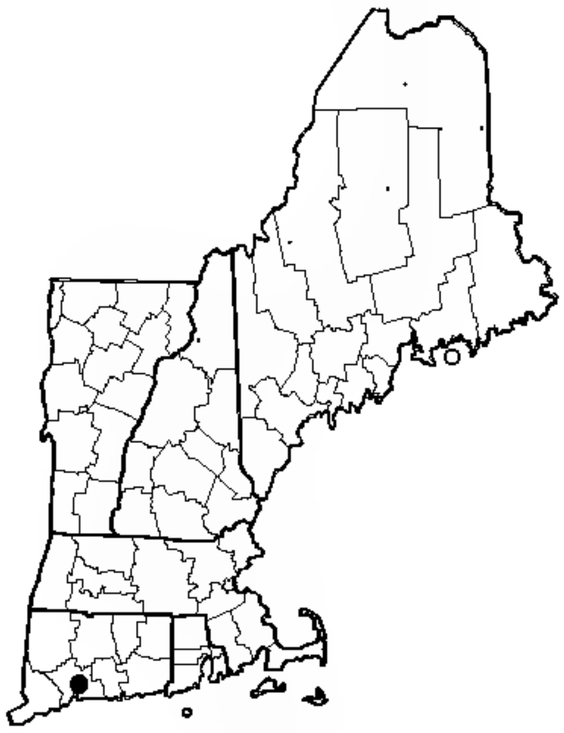
Phlox divaricata
subsp. *divaricata*



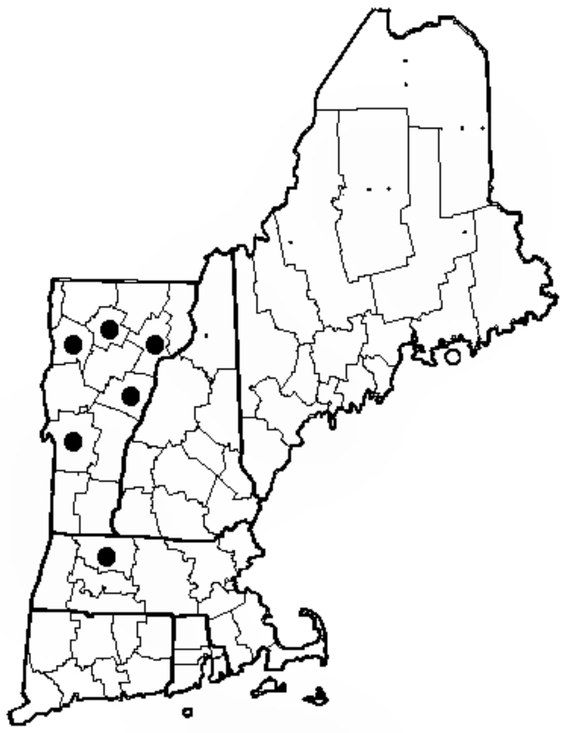
Phlox maculata
subsp. *maculata*



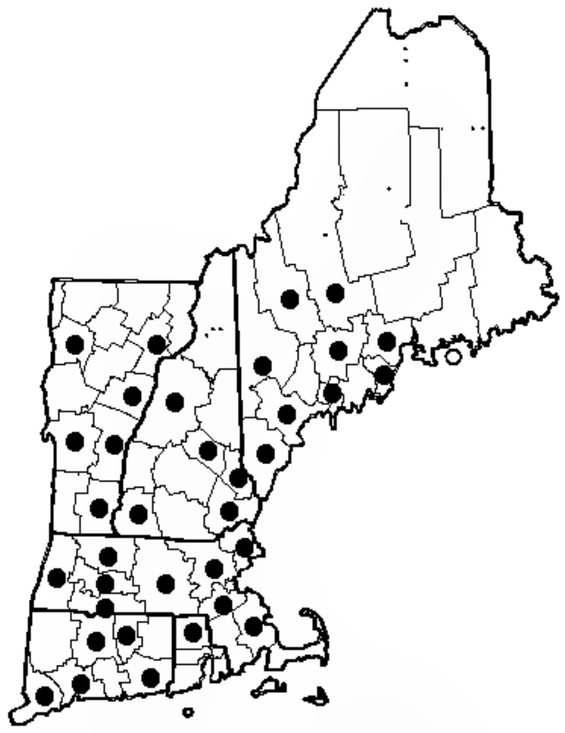
PHLOX PANICULATA



Phlox pilosa
subsp. *pilosa*

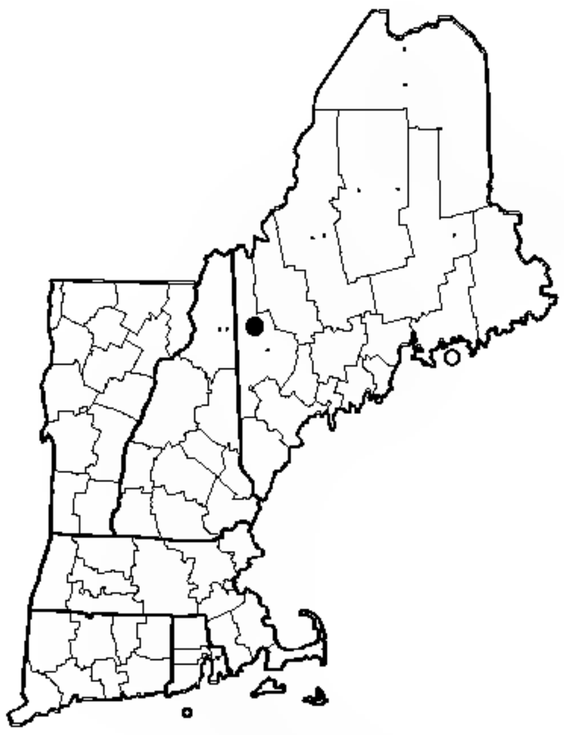


PHLOX STOLONIFERA

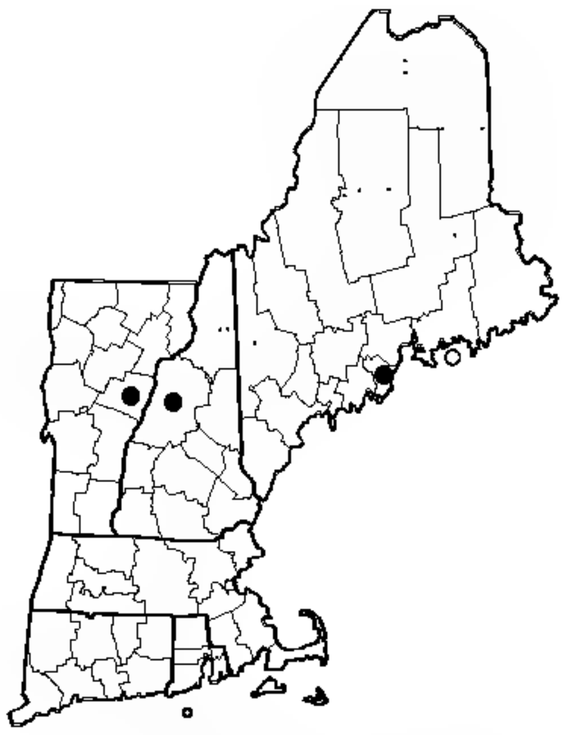


PHLOX SUBULATA
subsp. *SUBULATA*

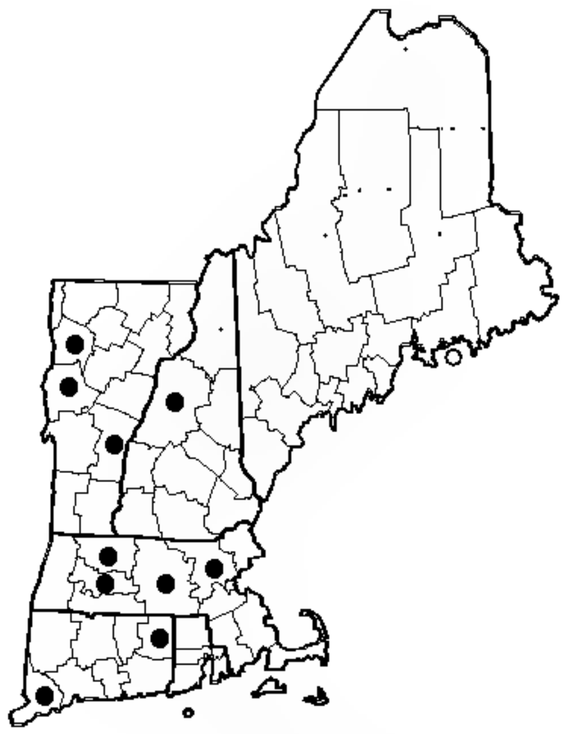
Figure 52 Distribution maps



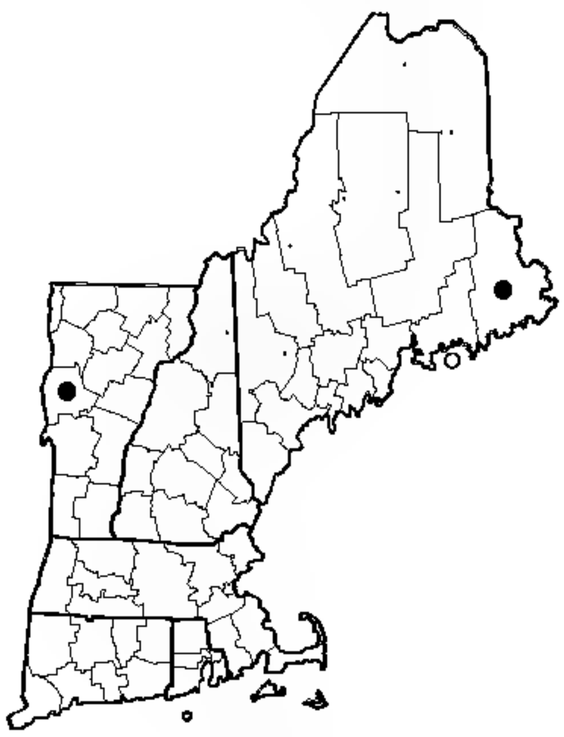
PHLOX PROCUMBENS



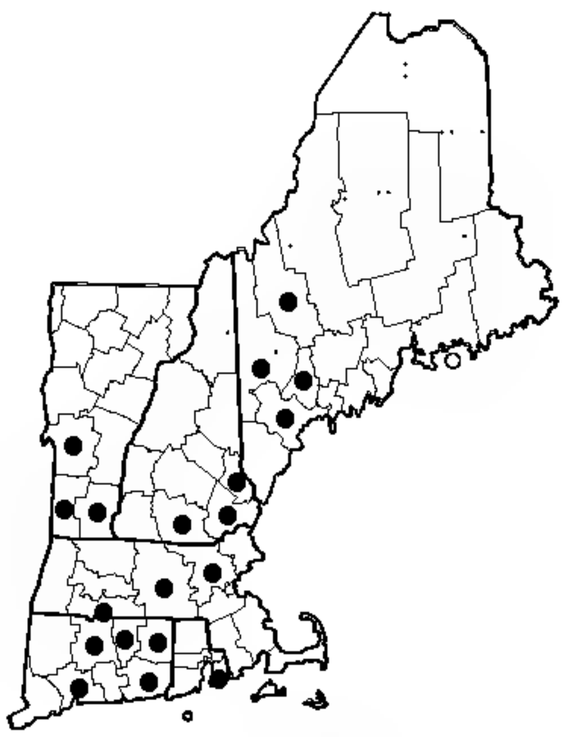
POLEMONIUM CAERULEUM
subsp. *CAERULEUM*



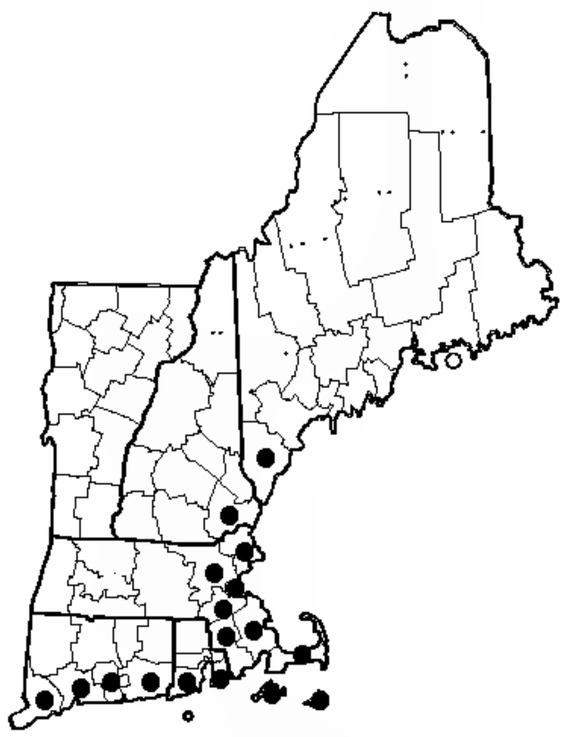
POLEMONIUM REPTANS
subsp. *REPTANS*



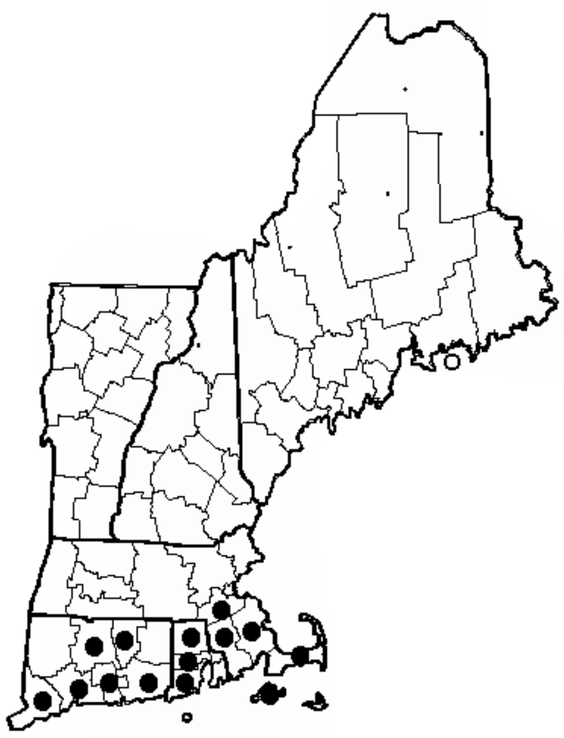
Polemonium vanbruntiae



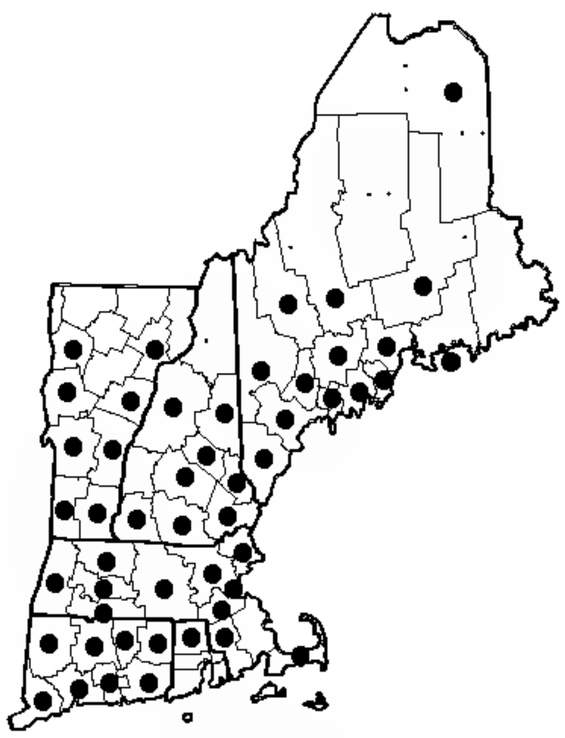
Polygala ambigua



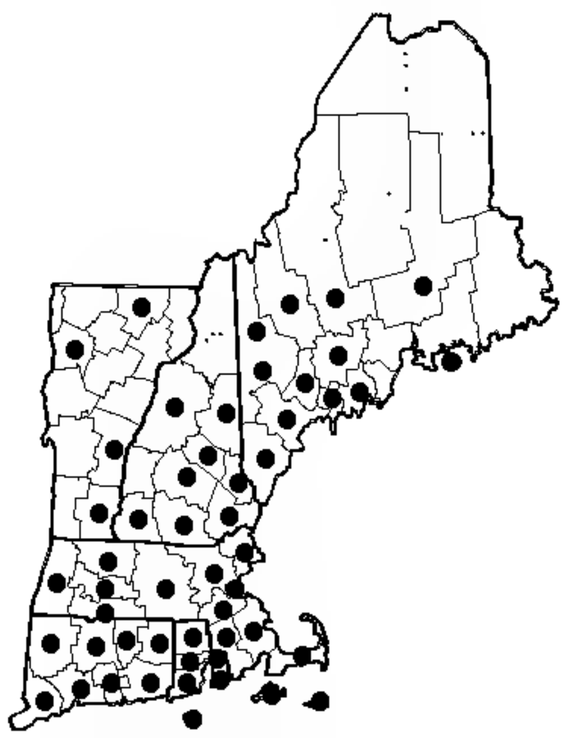
Polygala cruciata
var *aquilonia*



Polygala nuttallii

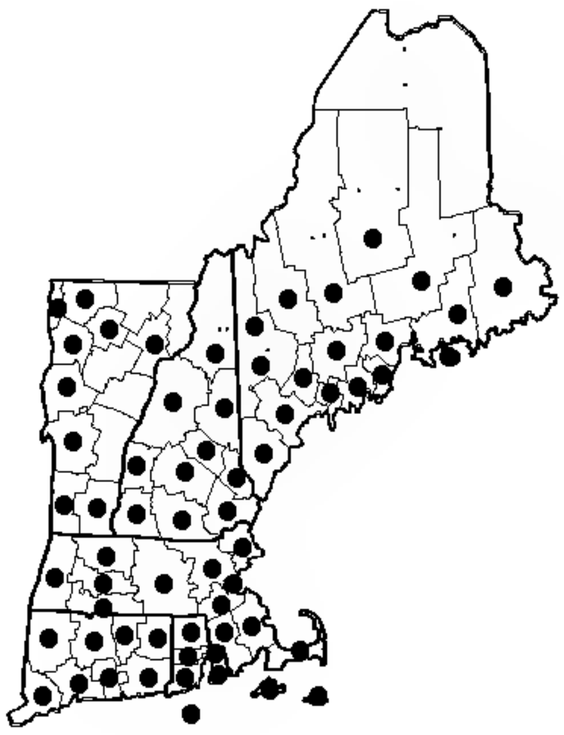


Polygala paucifolia

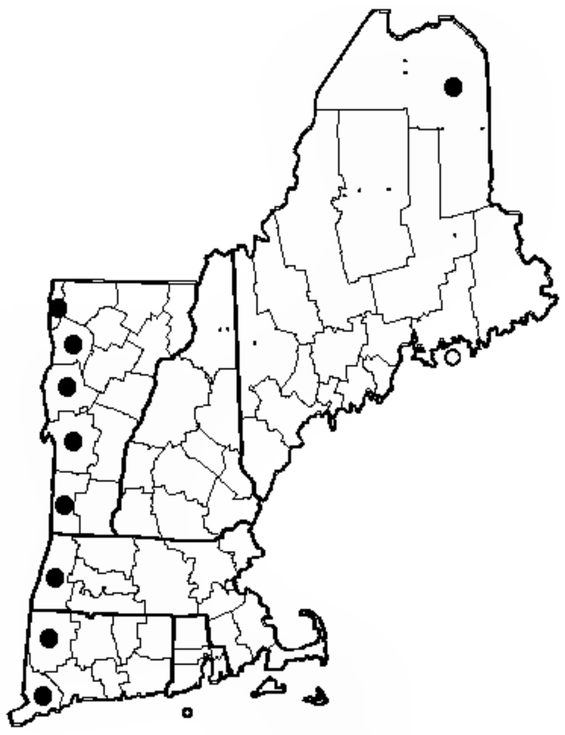


Polygala polygama

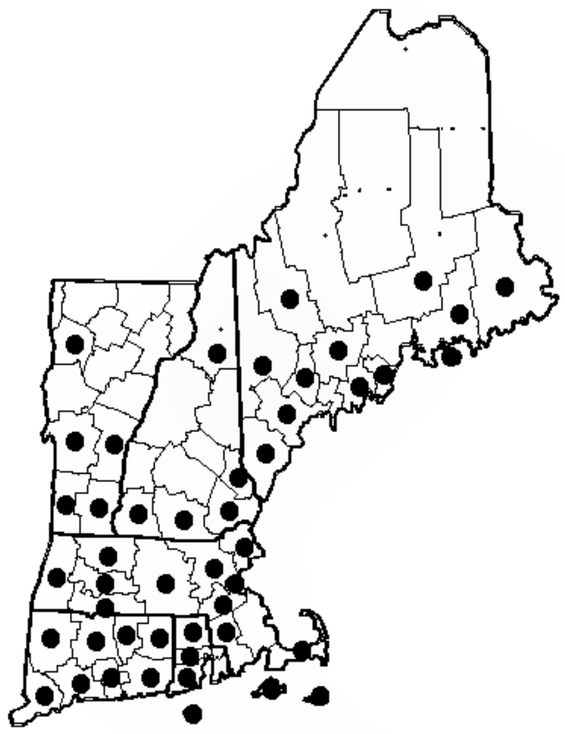
Figure 53 Distribution maps



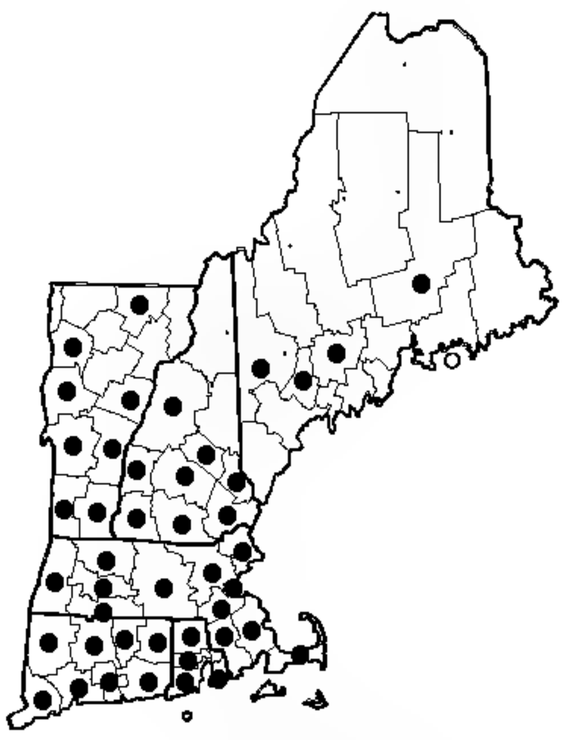
Polygala sanguinea



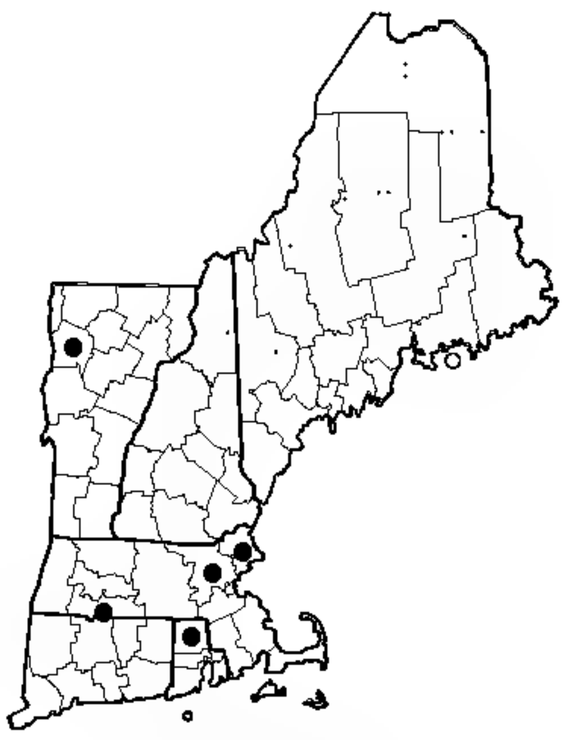
Polygala senega



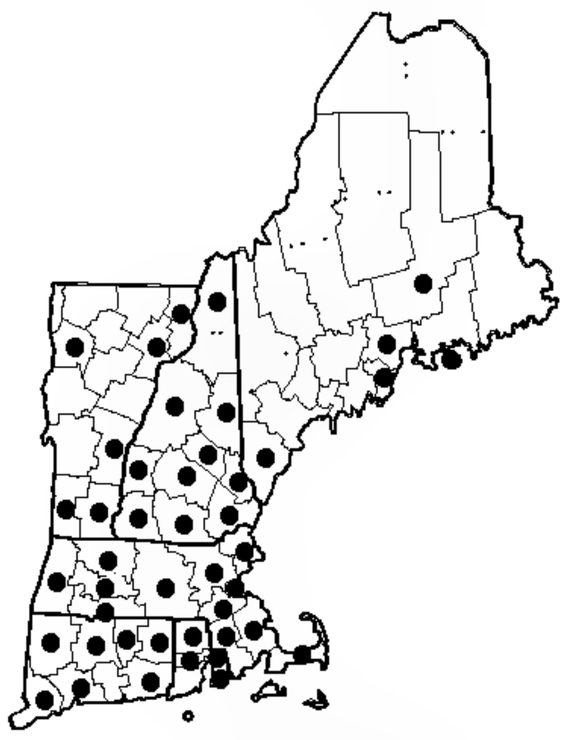
Polygala verticillata
var *verticillata*



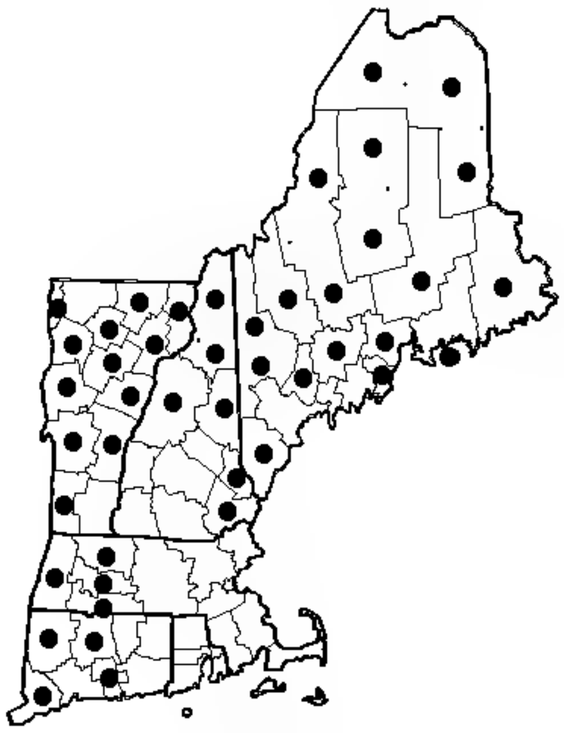
Ceanothus americanus



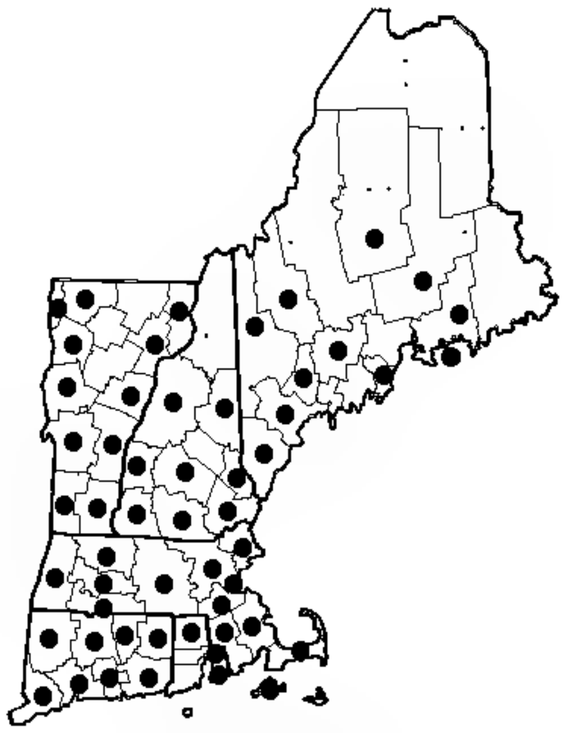
Ceanothus herbaceus



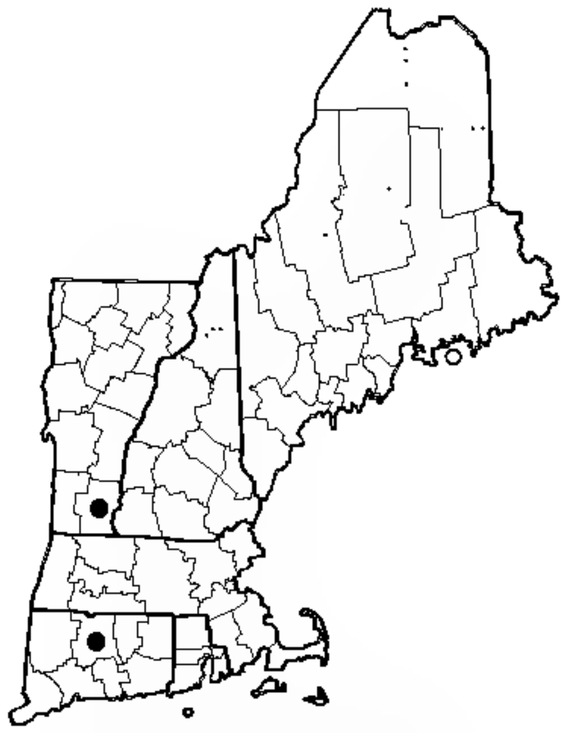
FRANGULA ALNUS



Rhamnus alnifolia

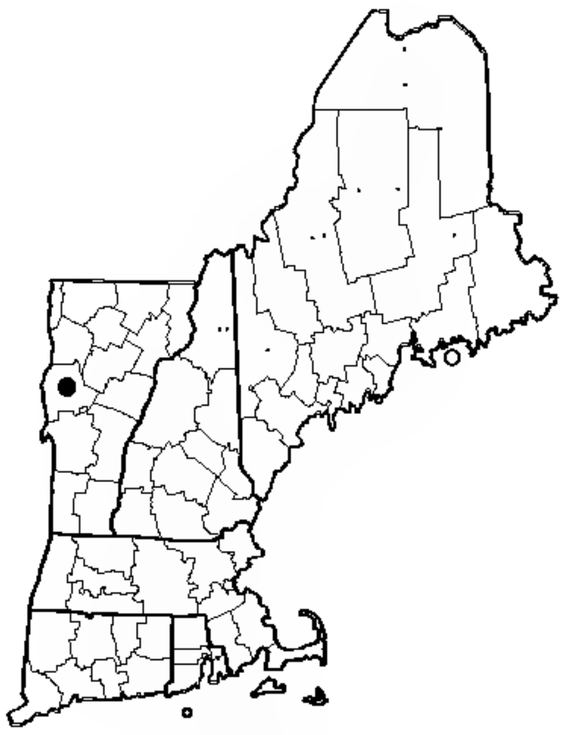


RHAMNUS CATHARTICA

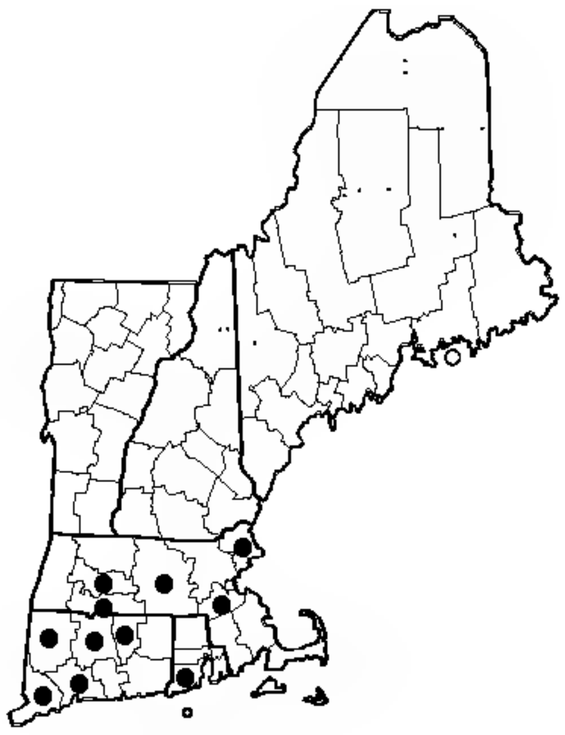


RHAMNUS DAVURICA
subsp. *DAVURICA*

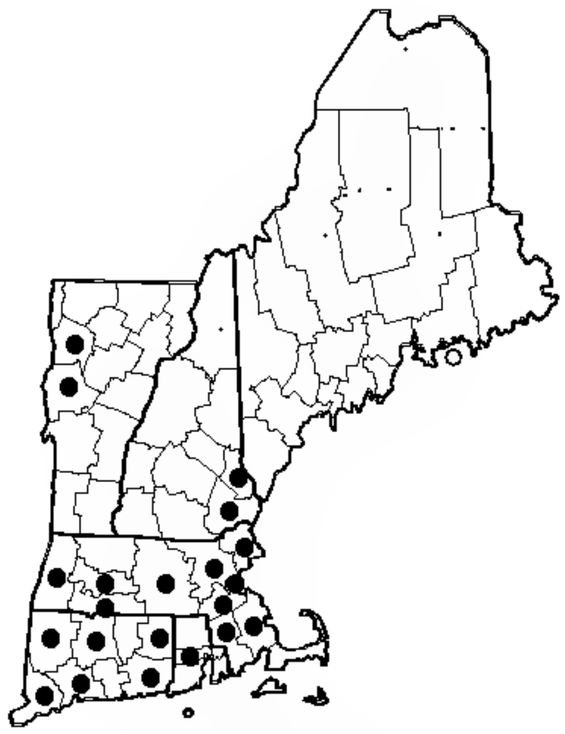
Figure 54 Distribution maps



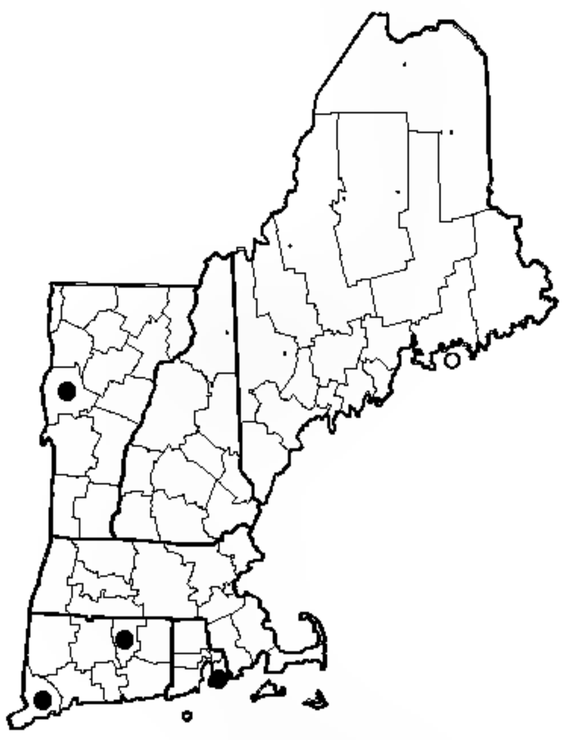
DICTAMNUS ALBUS



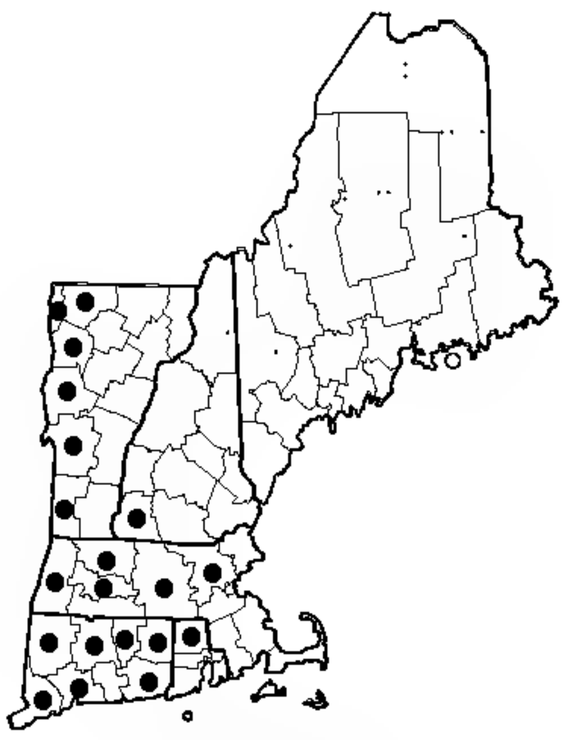
PHELLODENDRON AMURENSE



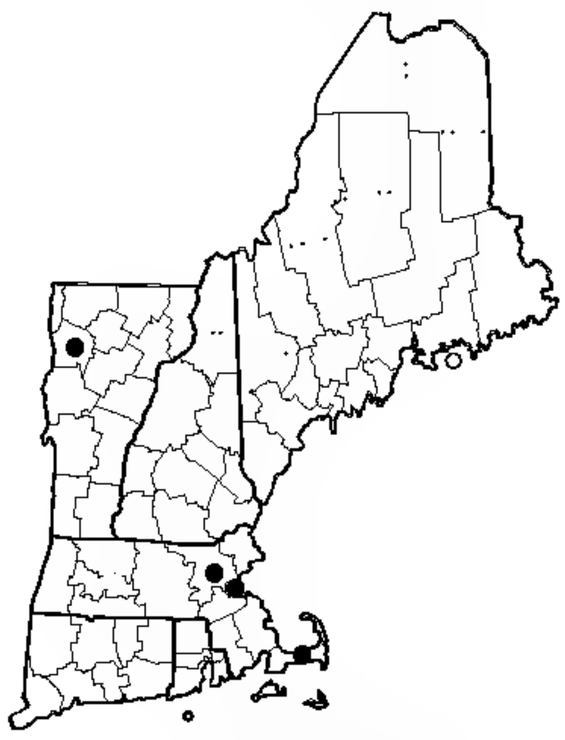
PTELEA TRIFOLIATA
subsp. *TRIFOLIATA*



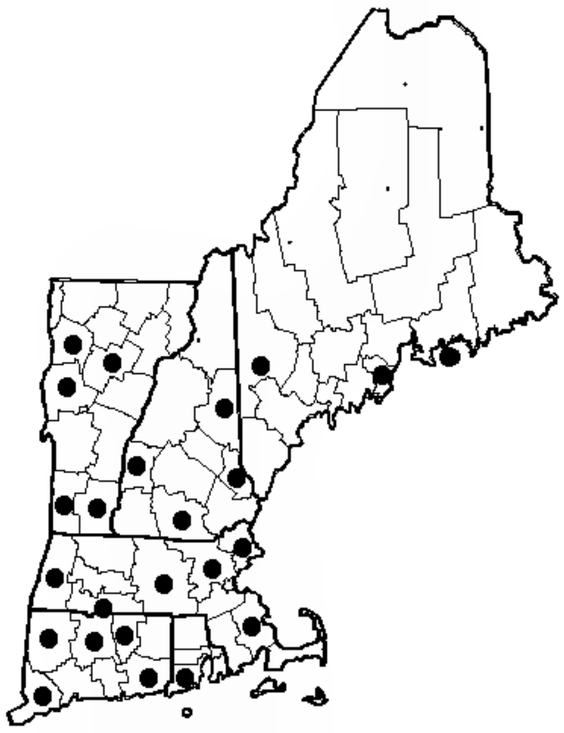
RUTA GRAVEOLENS



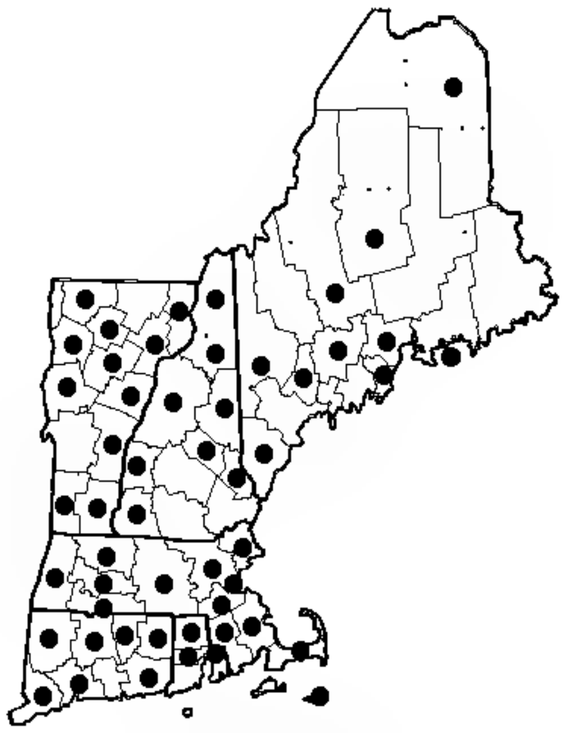
Zanthoxylum americanum



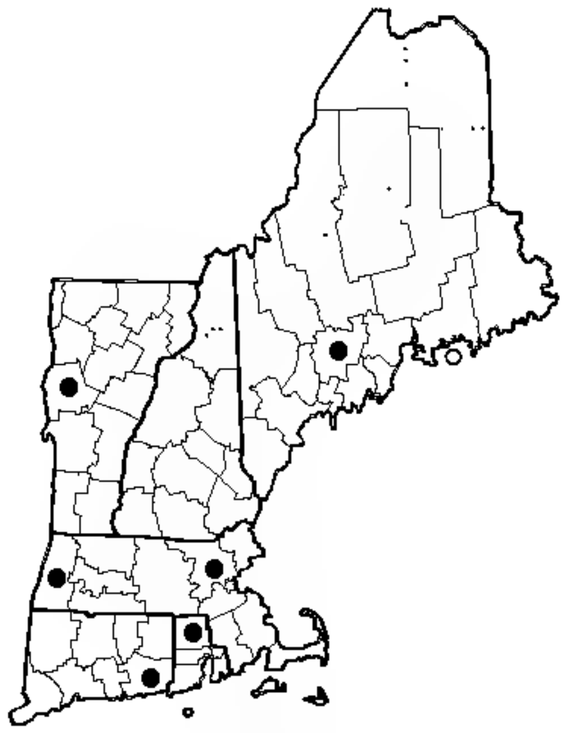
ACER CAMPESTRE



ACER GINNALA

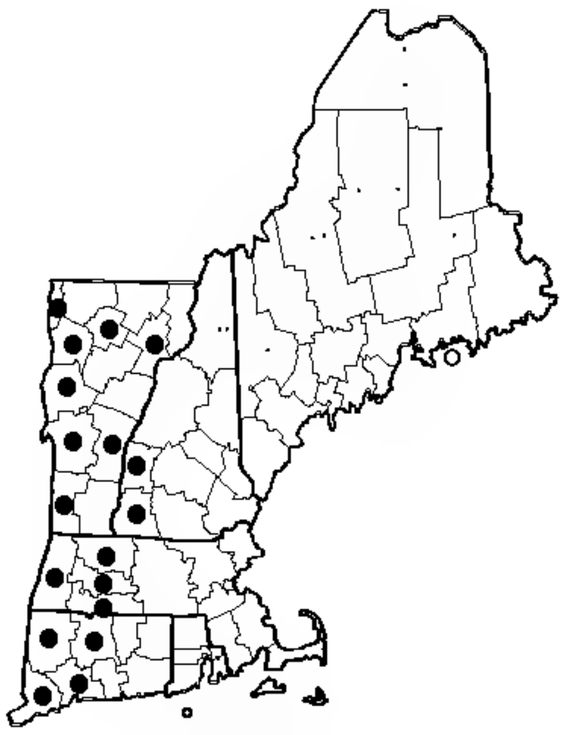


Acer negundo
var *negundo*

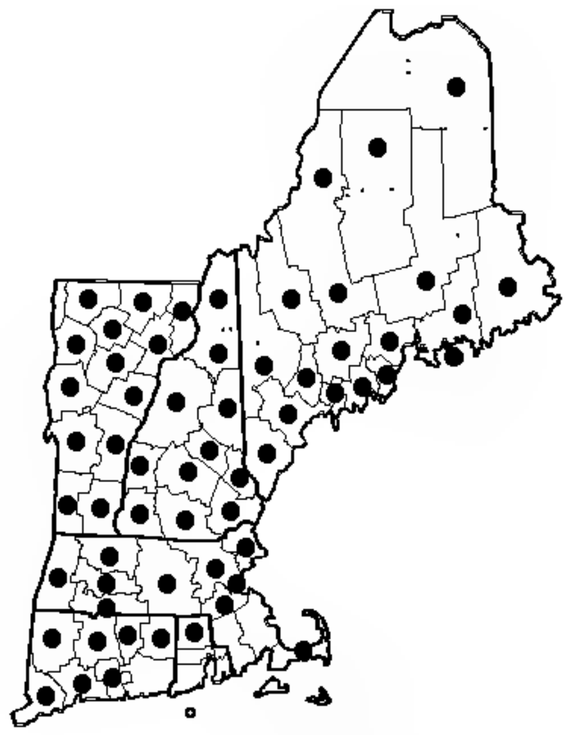


ACER NEGUNDO
var *VIOLACEUM*

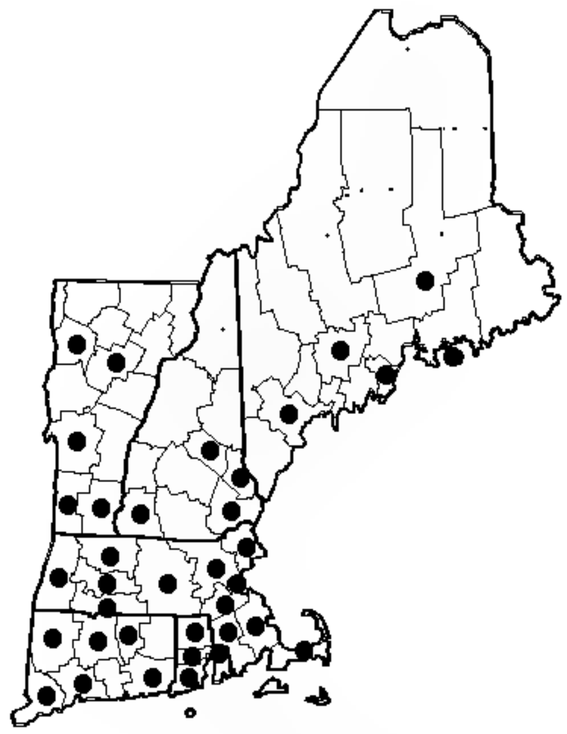
Figure 55 Distribution maps



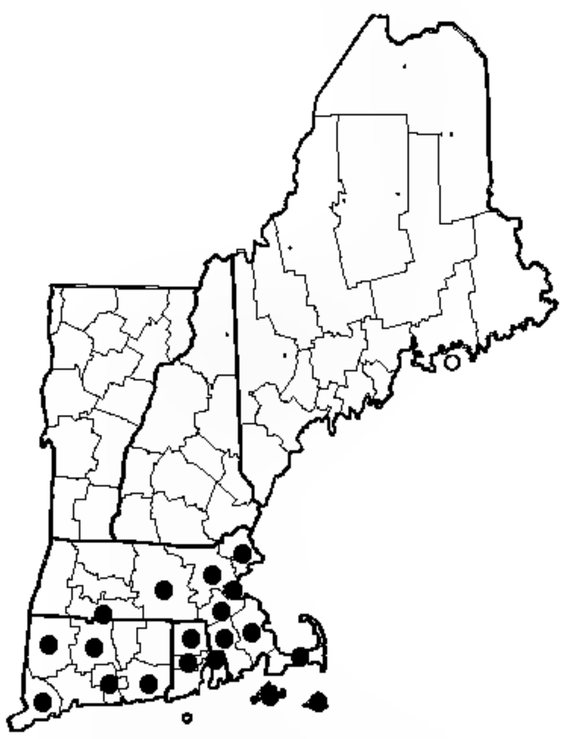
Acer nigrum



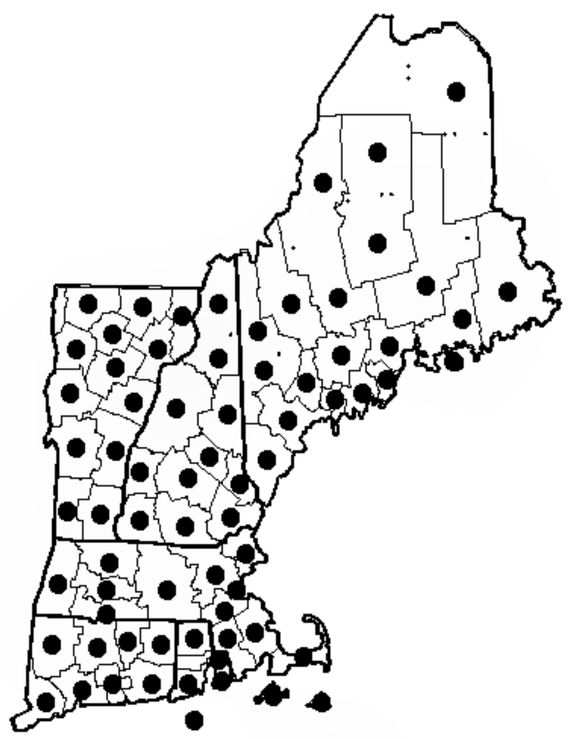
Acer pensylvanicum



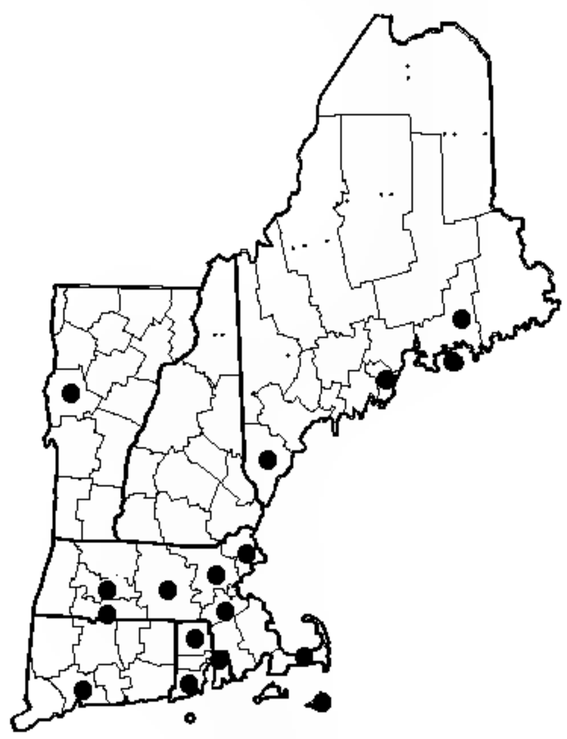
ACER PLATANOIDES



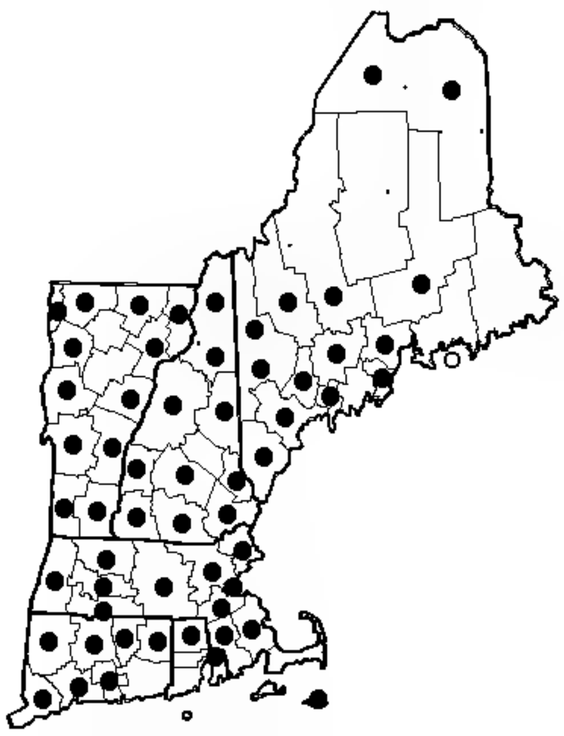
ACER PSEUDOPLATANUS



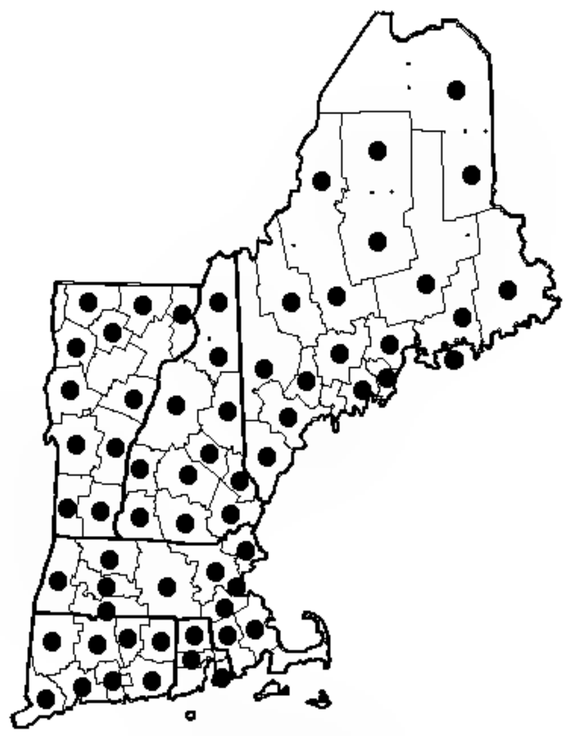
Acer rubrum
var *rubrum*



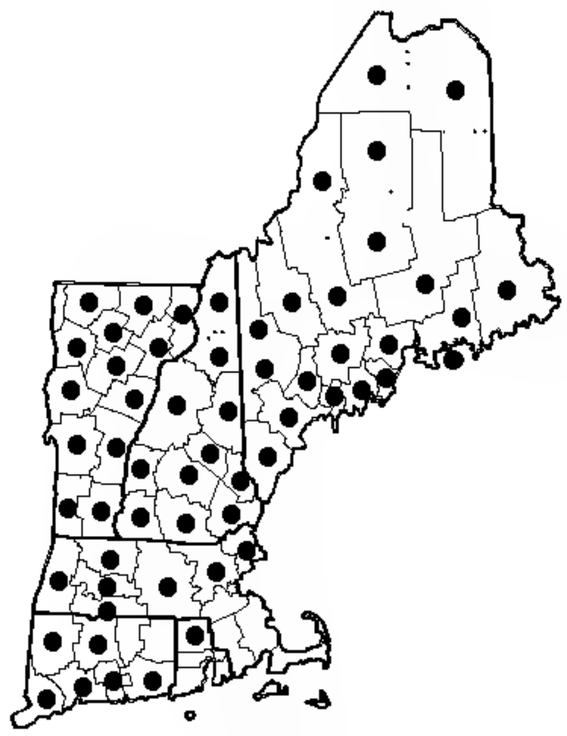
Acer rubrum
var *trilobum*



Acer saccharinum

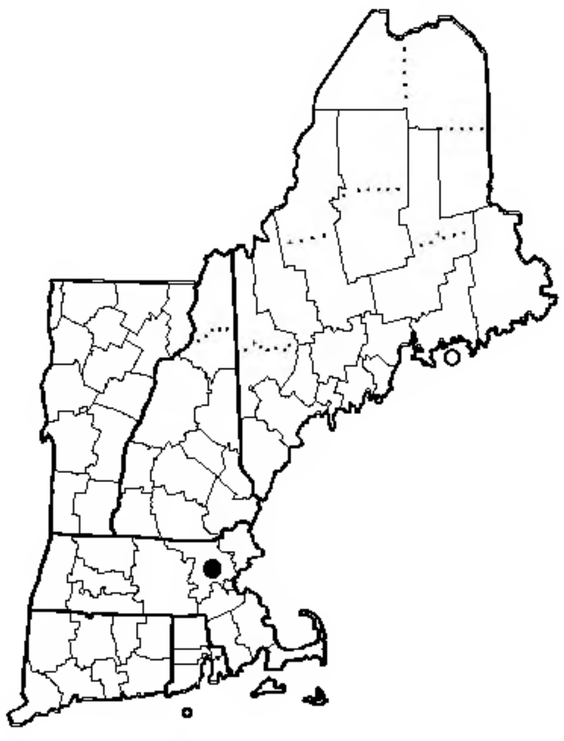


Acer saccharum
var *saccharum*

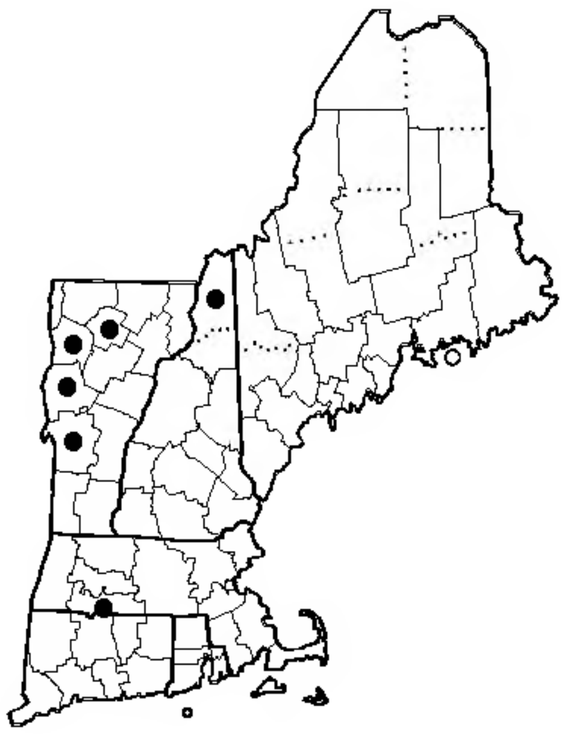


Acer spicatum

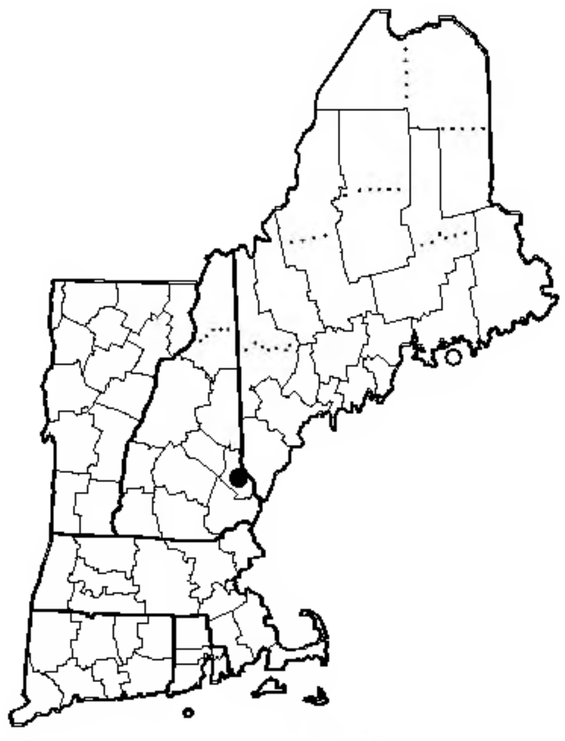
Figure 56 Distribution maps



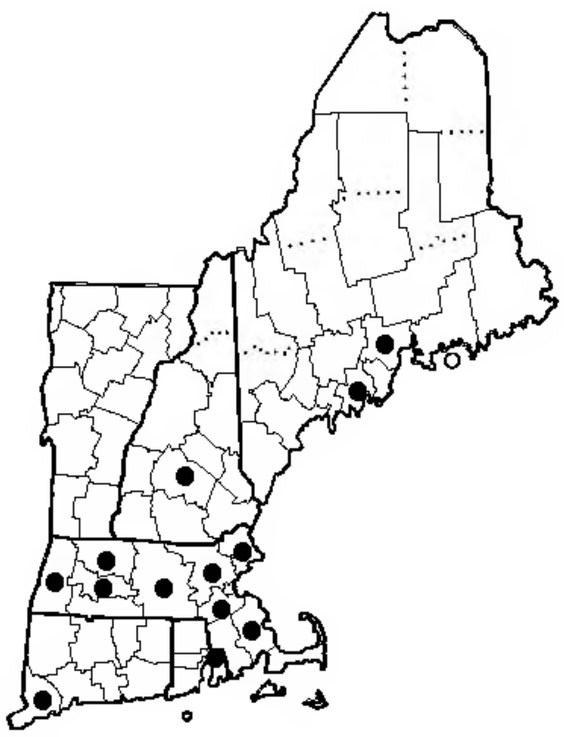
ACER TATARICUM



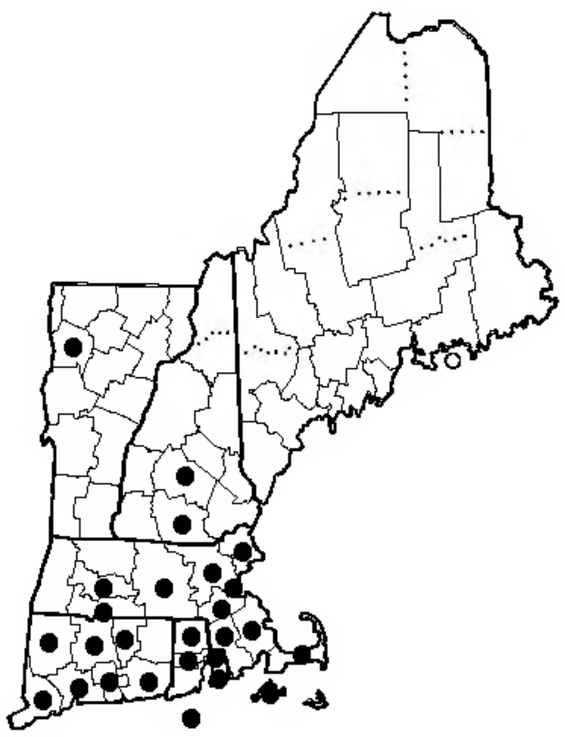
Acer X *freemanii*



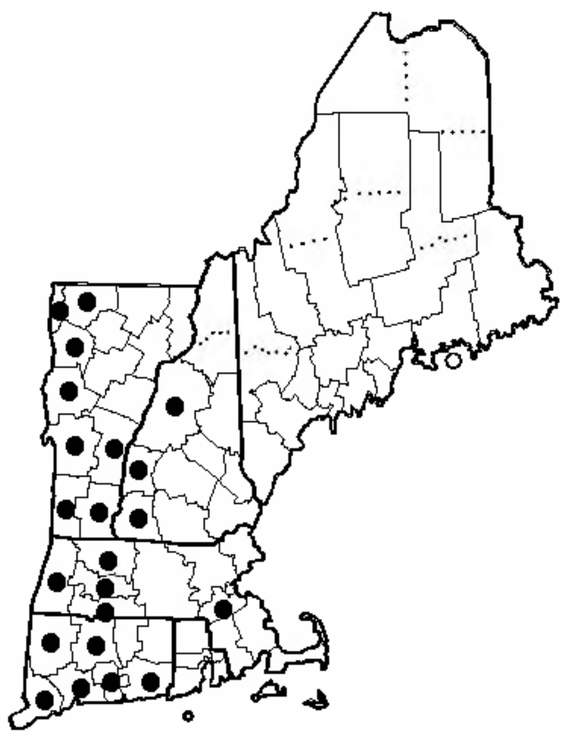
AESCULUS GLABRA
var. *GLABRA*



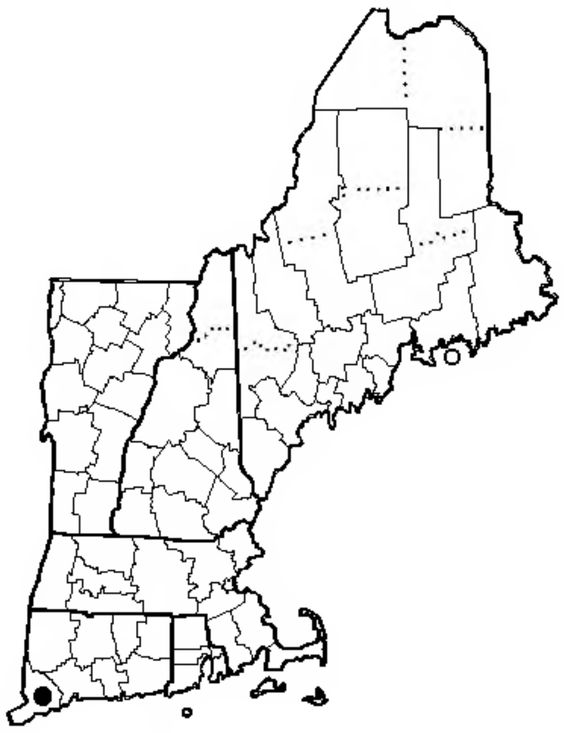
AESCULUS HIPPOCASTANUM



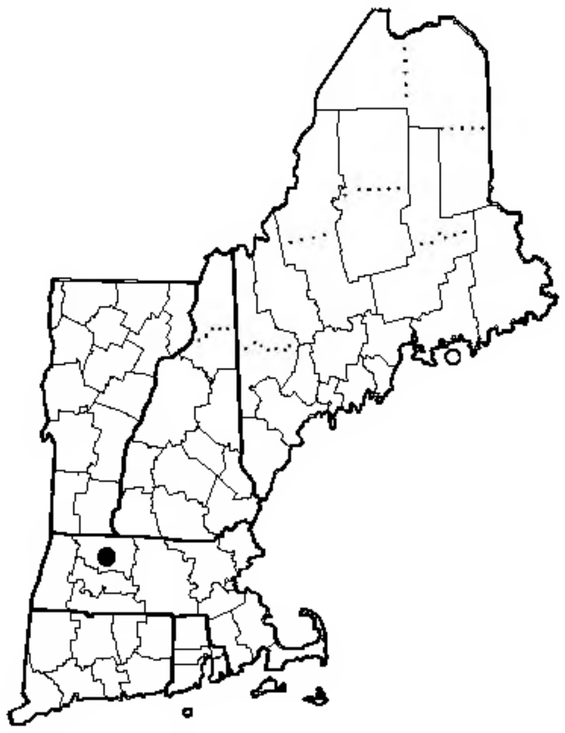
AILANTHUS ALTISSIMA



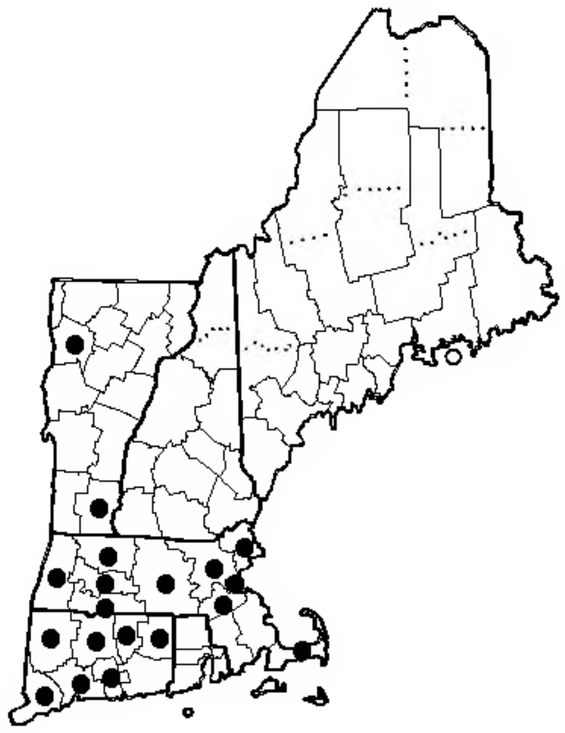
Staphylea trifolia



GLANDULARIA PULCHELLA

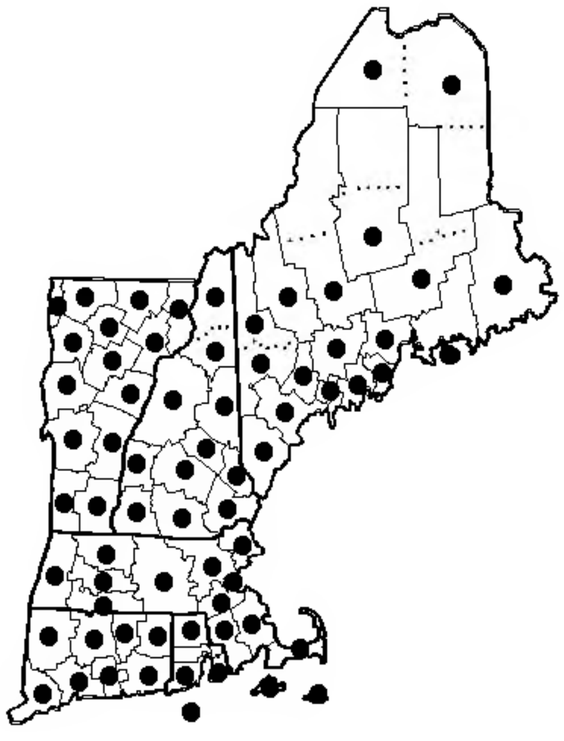


VERBENA BONARIENSIS

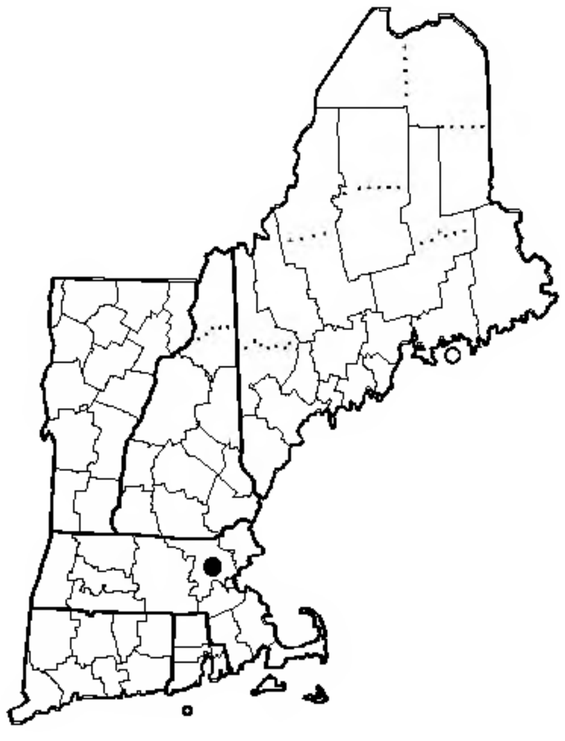


VERBENA BRACTEATA

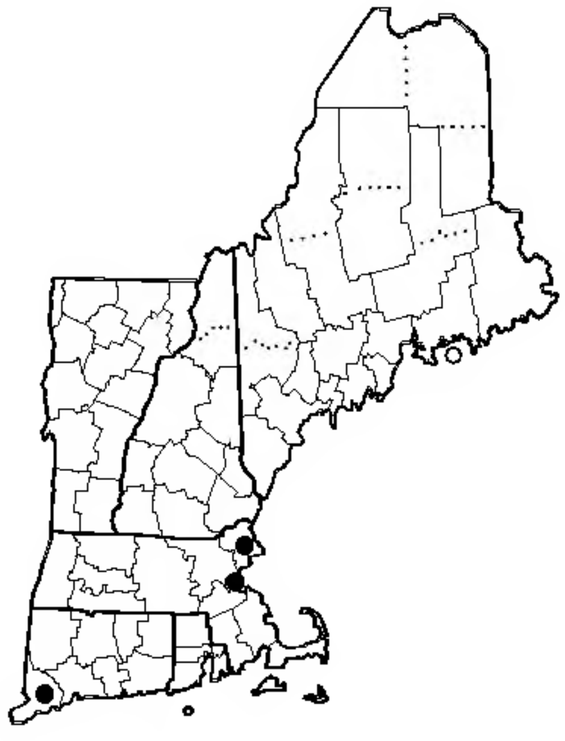
Figure 57. Distribution maps.



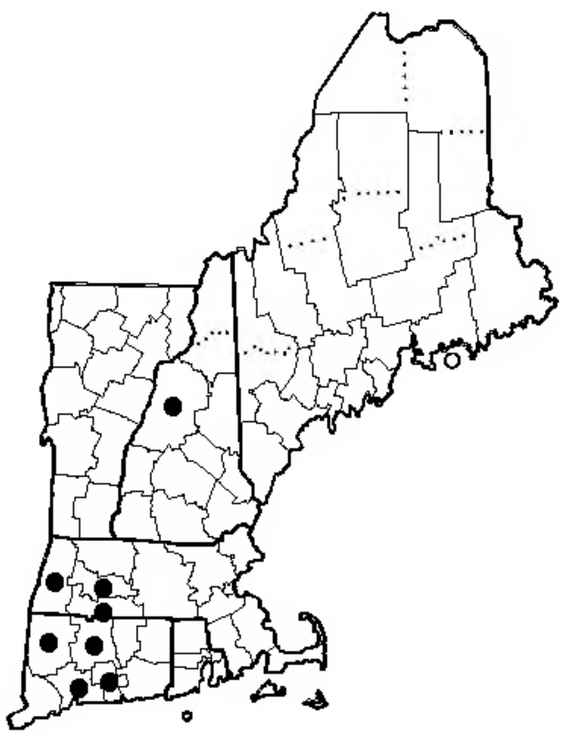
Verbena hastata



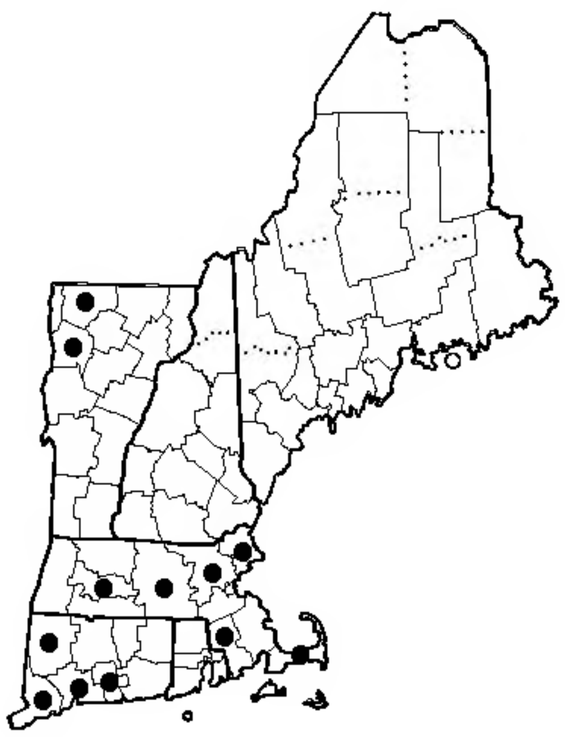
VERBENA HISPIDA



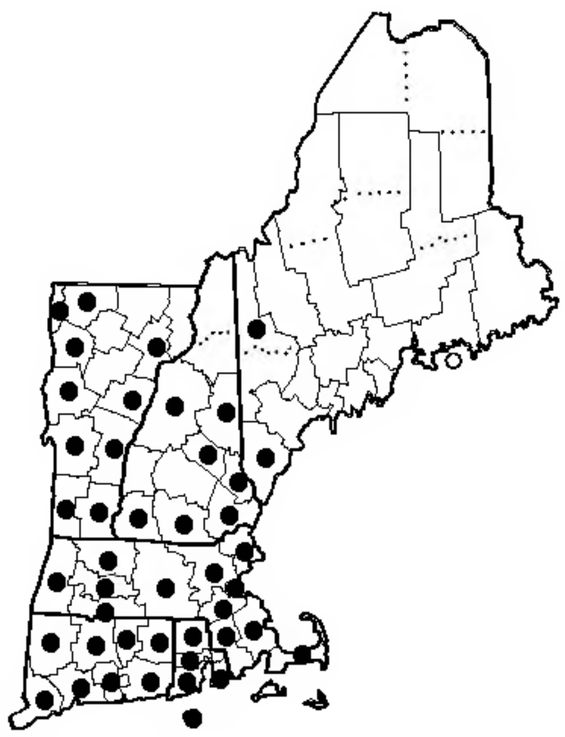
VERBENA OFFICINALIS



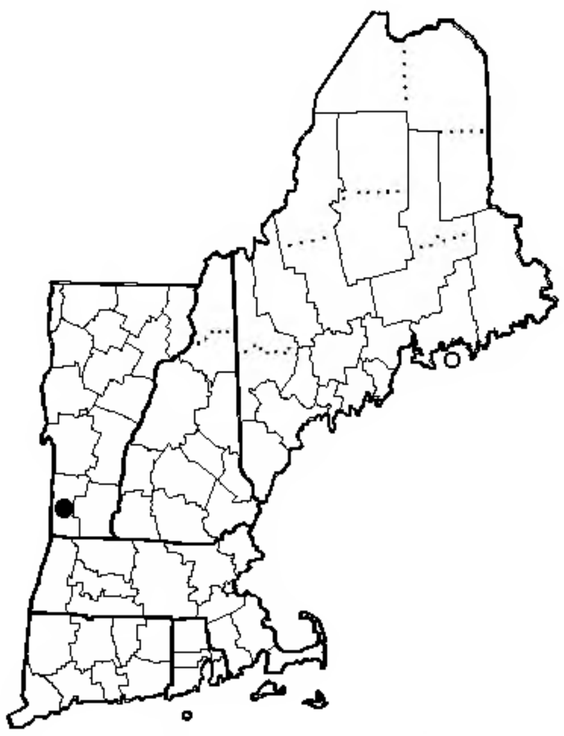
Verbena simplex



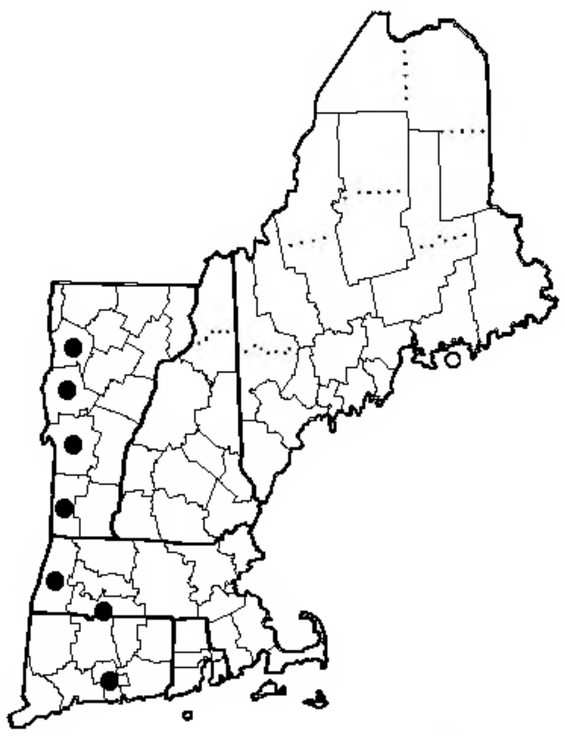
VERBENA STRICTA



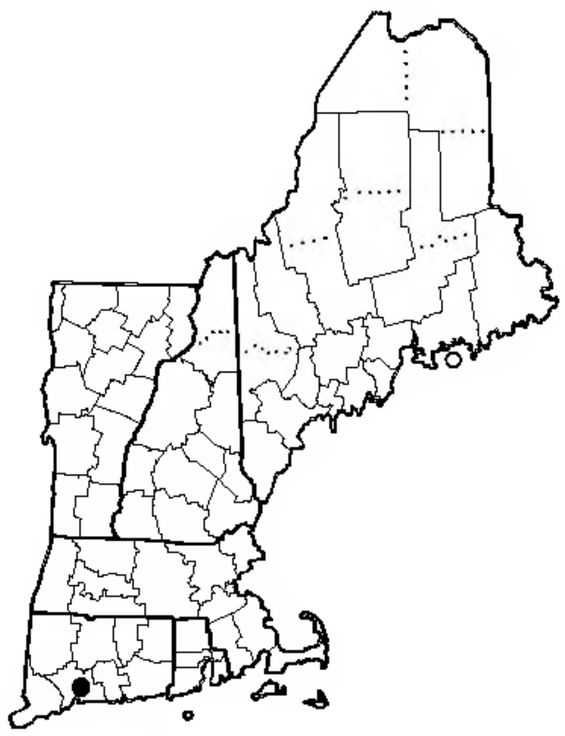
Verbena urticifolia



Verbena X *blanchardii*

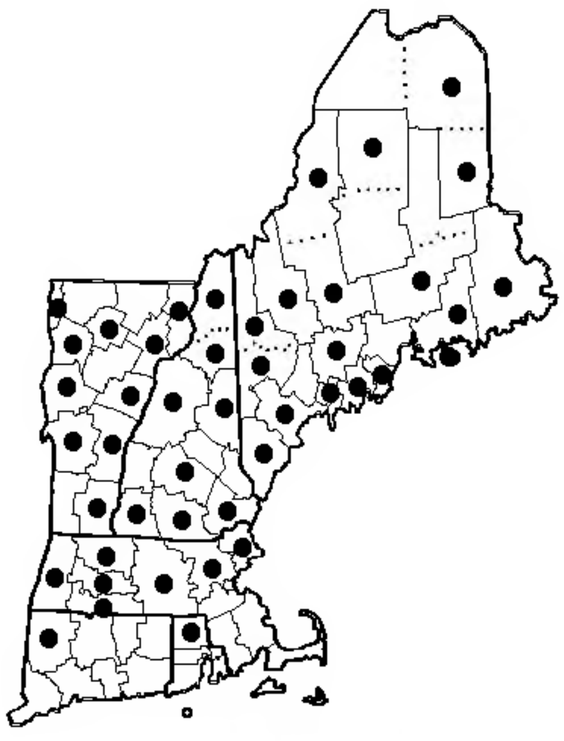


Verbena X *engelmannii*

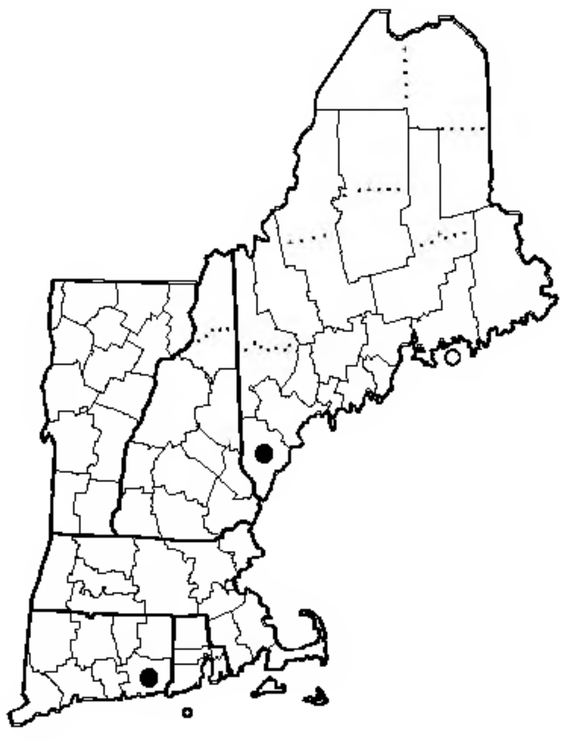


VERBENA X *RYDBERGII*

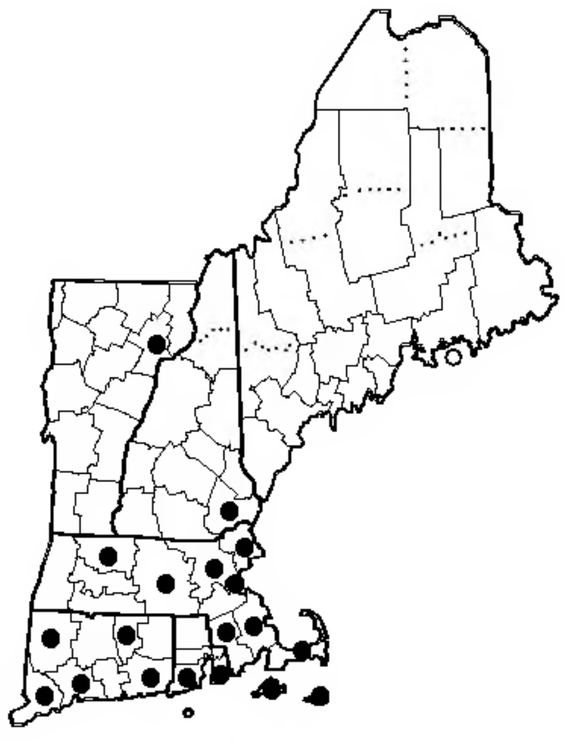
Figure 58. Distribution maps.



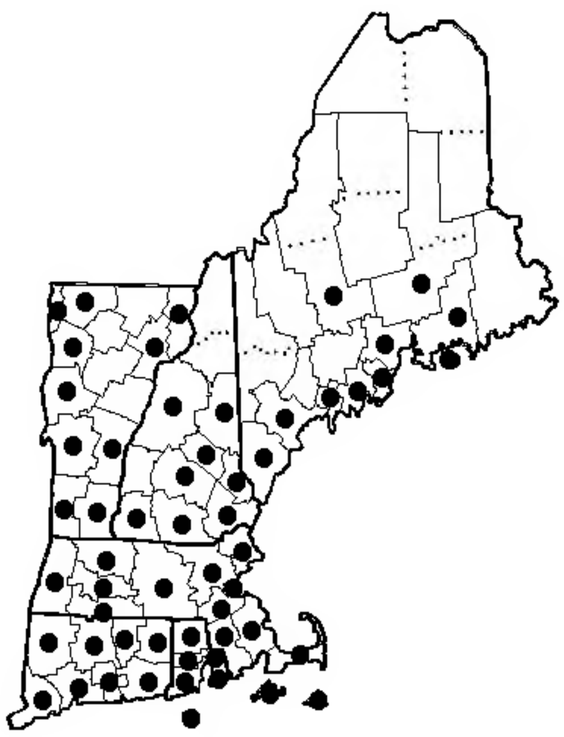
Arceuthobium pusillum



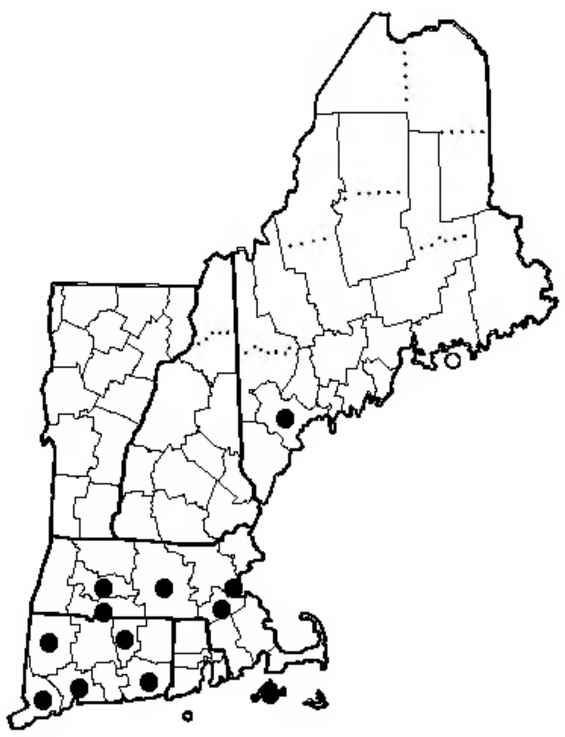
AMPELOPSIS CORDATA



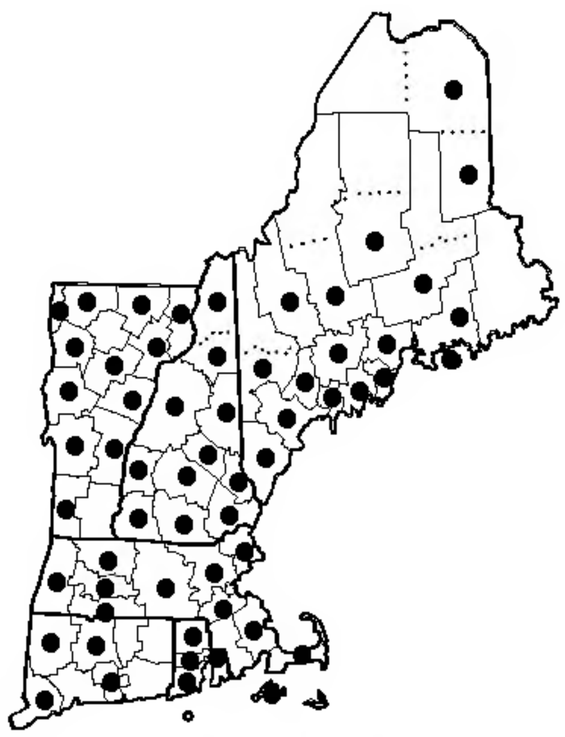
AMPELOPSIS GLANDULOSA



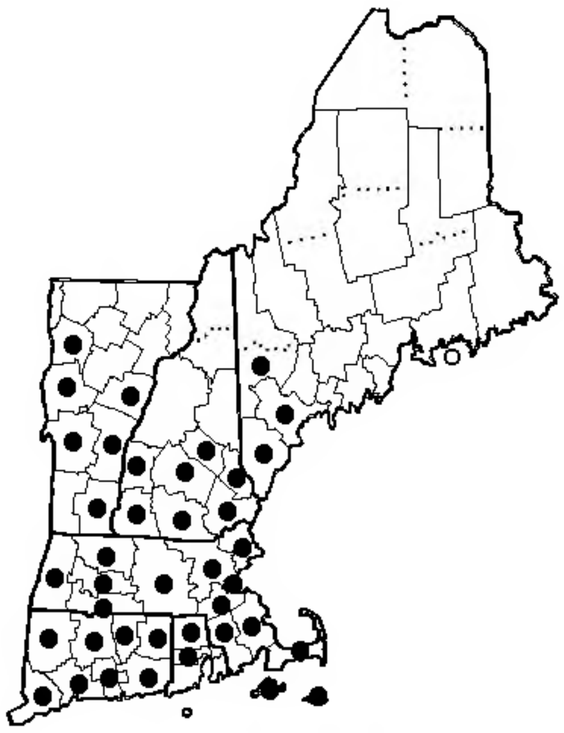
Parthenocissus quinquefolia



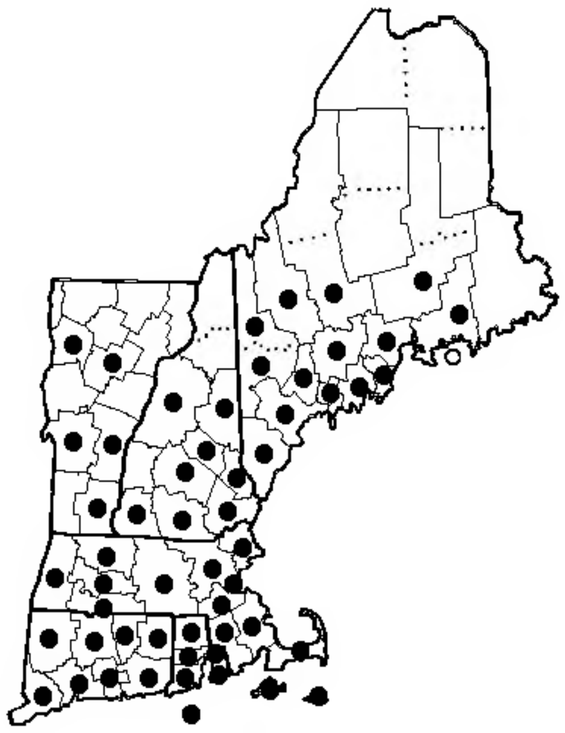
PARTHENOCISSUS TRICUSPIDATA



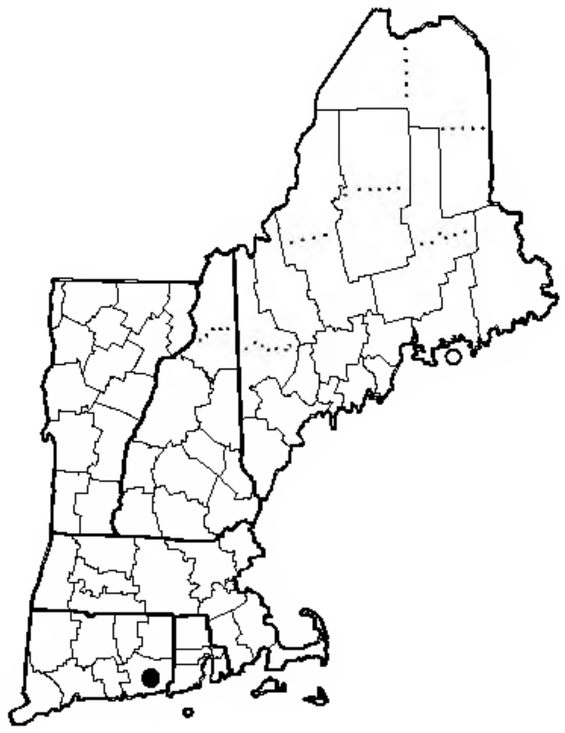
Parthenocissus vitacea



Vitis aestivalis

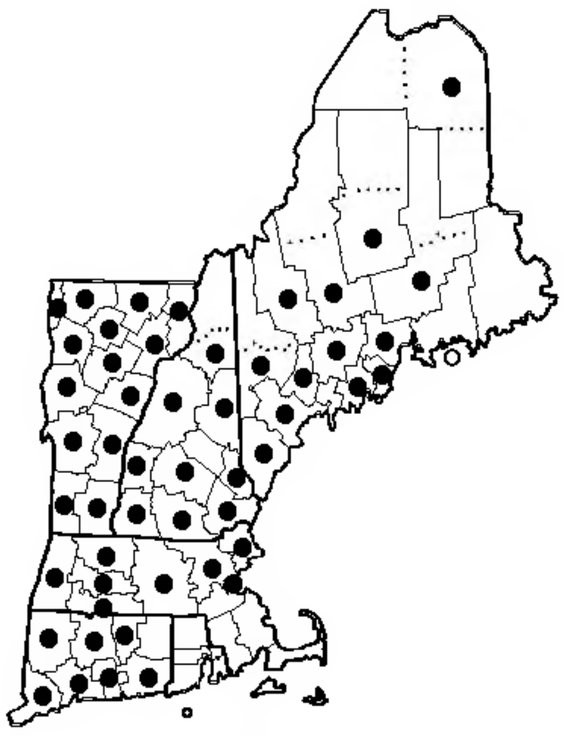


Vitis labrusca

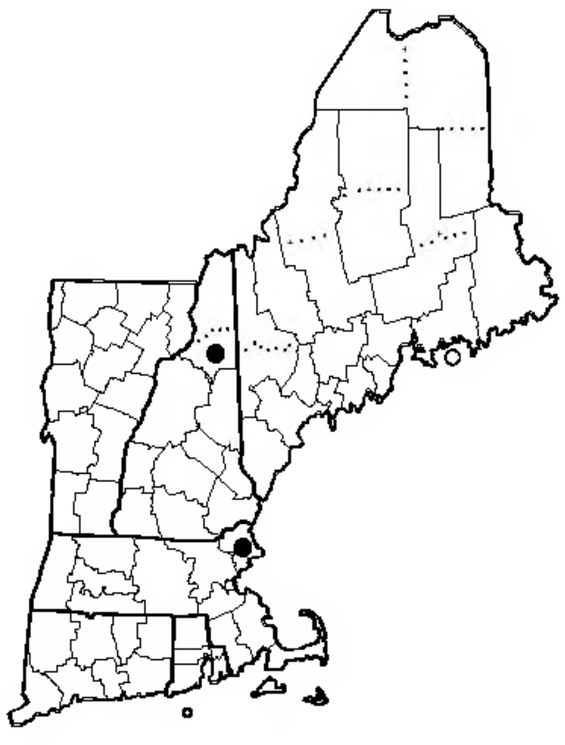


VITIS PALMATA

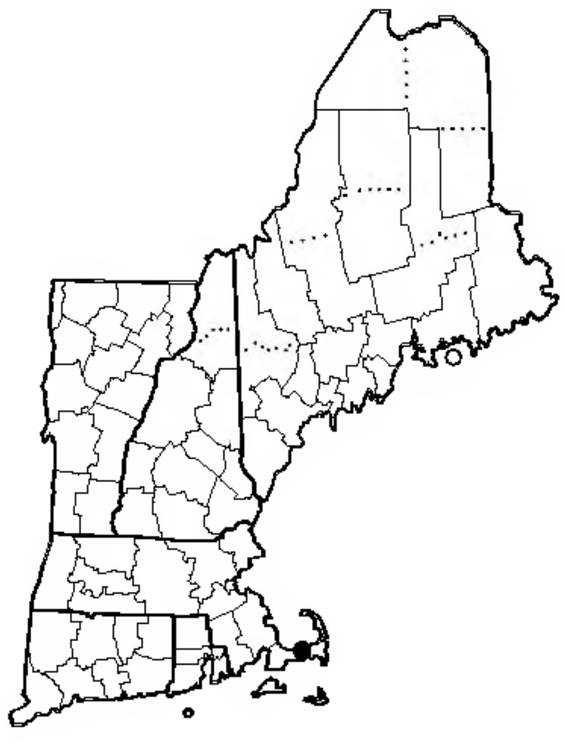
Figure 59. Distribution maps.



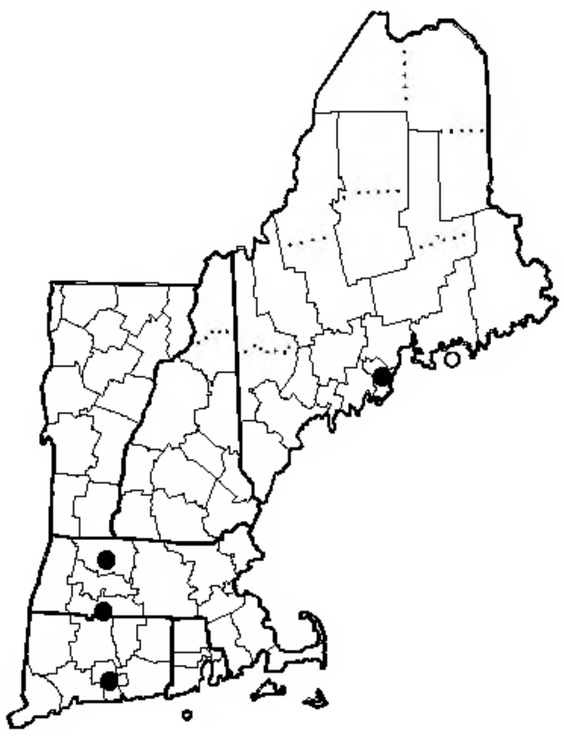
Vitis riparia



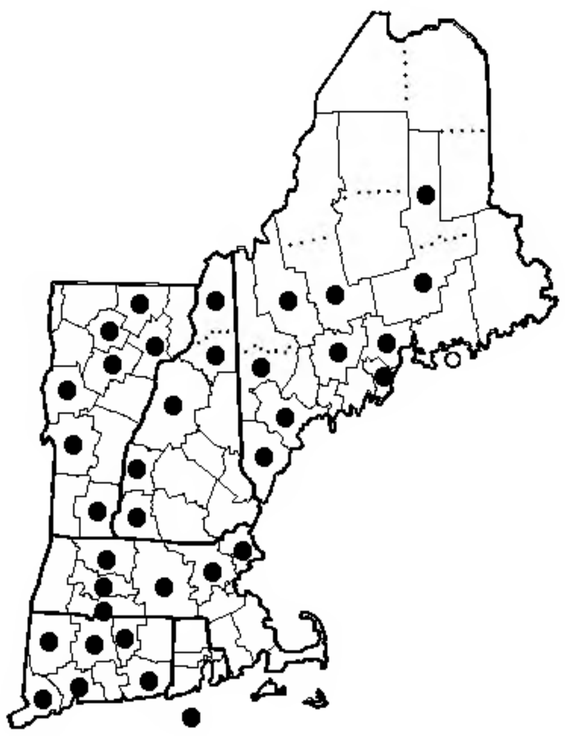
VITIS VINIFERA



VITIS VULPINA



VITIS X LABRUSCANA



Vitis X novae-angliae

Figure 60. Distribution maps.